CDX-602

SERVICE MANUAL

US Model

Ver 1.0 2001.07



Model Name Using Similar Mechanism	CDX-646
CD Drive Mechanism Type	MG-251B-137
Optical Pick-up Name	KSS-720A

SPECIFICATIONS

System	Compact disc digital audio system
Laser diode properties	Material: GaAlAs Wavelength: 780 nm Emission Duration: Continuous Laser out-put Power: Less than 44.6 μW*

* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.*

Frequency response	10 – 20,000 Hz
Wow and flutter	Below the measurable limit
Signal-to-noise ratio	94 dB
Outputs	BUS control output (8 pins) Analog audio output (RCA pin)
Current drain	800 mA (during CD playback) 800 mA (during loading or ejecting a disc)
Operating temperature	–10°C to +55°C (14°F to 131°F)
Dimensions	Approx. 262 × 90 × 185 mm (10 3/8 × 3 5/8 × 7 3/8 in.) (w/h/d) not incl. projecting parts and controls
Mass	Approx. 2.1 kg (4 lb. 10 oz.)
Power requirement	12 V DC car battery (negative ground)
Supplied accessories	Disc magazine (1) Parts for installation and connections (1 set)

Design and specifications are subject to change without notice.

COMPACT DISC CHANGER

9-873-234-01
2001G0500-1

Sony Corporation
e Vehicle Company
Shinagawa Tec Service Manual Production Group

SONY®

TABLE OF CONTENTS

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

> CAUTION
> Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
SERVICING NOTES

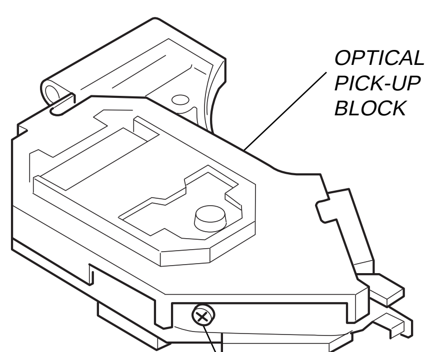
NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

If the optical pick-up block is defective, please replace the whole optical pick-up block.
Never turn the semi-fixed resistor located at the side of optical pick-up block.

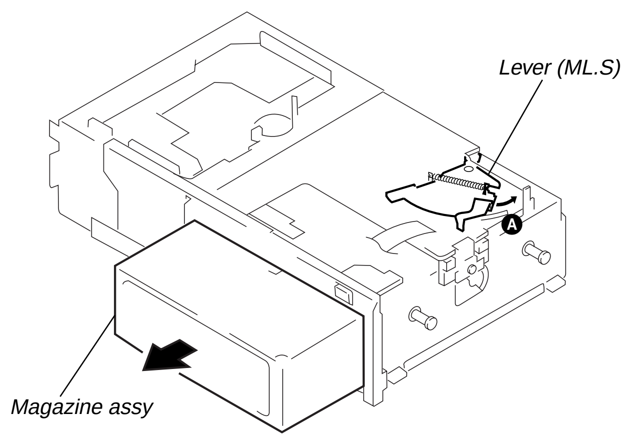


DISC MAGAZINE GETTING OUT PROCEDURE ON THE POWER SUPPLY IS OFF

Remove the CASE (LOWER.T) beforehand

1) Press the lever (ML.S) assy in the direction of arrow Ⓐ.
2) Removal the magazine assy.

Note: Take out the magazine only when the tray is completely within the magazine. If the disk or tray is sticking out, turn on the power and eject the magazine.



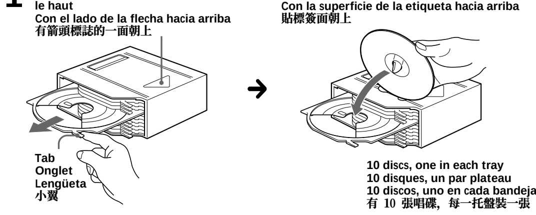
SECTION 2
GENERAL

This section is extracted from instruction manual.

Inserting a disc / Insertion d'un disque / Inserción de discos / 裝入一張唱碟

1 **With the arrow side facing up**
Avec la partie fléchée tournée vers le haut
Con el lado de la flecha hacia arriba
有箭頭標誌的一面朝上

Labeled surface up
Etiquette vers le haut
Con la superficie de la etiqueta hacia arriba
貼標簽面朝上



Use the supplied disc magazine or the disc magazine XA-250.The disc magazine XA-10B can not be used with this unit.If you use any other magazine,it may cause a malfunction.

Utilisez le magasin à disques fourni ou un magasin à disques XA-250. Vous ne pouvez pas utiliser de magasin à disques XA-10B avec cet appareil. L'utilisation d'un autre type de magasin à disques risque de provoquer un dysfonctionnement.

Emplee el cargador de discos suministrado o el XA-250. El cargador de discos XA-10B no puede utilizarse con esta unidad. Si emplea otro tipo de cargador, puede producir fallos de funcionamiento.

請使用附帶的唱碟匣或唱碟匣 XA-250。唱碟匣 XA-10B 是不能用於本機的。您如果隨便使用其他唱碟匣，將可能引起故障的。

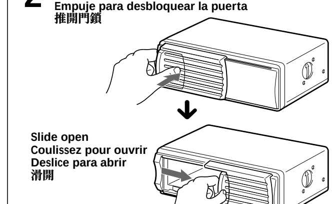
Notes
- *To listen to an 8 cm (3 in.) CD, use the separately sold Sony CD adapter CSA-8. Be sure to always use the specified adapter, as failing to do so may cause a malfunction of the unit. If you use any other adapter, the unit may not operate properly. When using the Sony CD adapter, make sure the three catches on the adapter are firmly latched onto the 8 cm CD.*
- *Do not insert the Sony CD adapter CSA-8 in the magazine without a disc, malfunction may result.*

Remarques
- *Pour écouter un disque de 8 cm (3 po.), utilisez l'adaptateur Sony CSA-8, vendu séparément, à l'exclusion de tout autre, pour éviter tout probléme de fonctionnement. Si vous utilisez un autre adaptateur, l'appareil risque de ne pas fonctionner correctement. Quand vous utilisez l'adaptateur CD Sony, vérifiez que les trois griffes soient bien en prise sur le CD de 8 cm.*
- *Ne pas insérer d'adaptateur CD Sony CSA-8 dans le chargeur sans disque, car cela pourrait provoquer un dysfonctionnement.*

Notas
- *Para escuchar un disco compacto de 8 cm, utilice el adaptador de discos compactos Sony CSA-8, que podrá adquirir por separado. Asegúrese de utilizar siempre el adaptador especificado, ya que si utiliza otro tipo de adaptador es posible que la unidad no funcione correctamente. Al utilizar el adaptador de discos compactos Sony, asegúrese de que los tres enganches del adaptador están firmemente ajustados al disco compacto de 8 cm.*
- *No inserte el adaptador de discos compactos Sony CSA-8 en el cargador sin discos, ya que pueden producirse fallos de funcionamiento.*

註
- *要聽 8 cm CD 時，請用另售品的 Sony CD 轉接器 CSA-8。一定請使用指定的轉接器，否則將可能使機器故障。如果使用任何其他轉接器，機器將可能不能作正常的操作。使用 Sony 牌 CD 轉接器時，須確認轉接器上的 3 個簧舌是否穩固地固定好 8 cm CD。*
- *不要把 Sony CD 轉接器 CSA-8 裝入沒有唱碟的唱碟匣中。*

2 **Push to unlock the door**
Poussez pour déverrouiller la porte
Empuje para desbloquear la puerta
推開門鎖



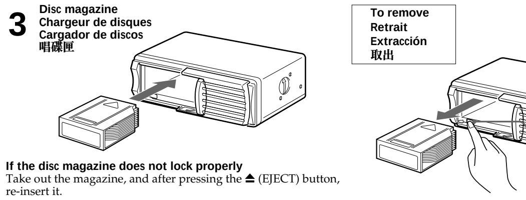
Note
To prevent injury, do not insert your hand in the CD changer.

Remarque
Pour éviter toute blessure, ne pas introduire la main dans le changeur de CD.

Nota
Para evitar lesiones, no inserte la mano en el cambiador de CD.

註
請勿將手伸進 CD 換碟機內，以防傷害。

3 **Disc magazine**
Chargeur de disques
Cargador de discos
唱碟匣



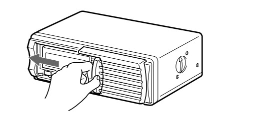
If the disc magazine does not lock properly
Take out the magazine, and after pressing the ⏏ (EJECT) button, re-insert it.

Si vous ne pouvez pas fermer le chargeur de disques
Sortez le chargeur et, après avoir appuyé sur la touche ⏏ (EJECT), réinsérez-le.

Si el cargador de discos no se cierra correctamente
Extraiga el cargador, pulse el botón ⏏ (EJECT) y vuelva a insertarlo.

如果唱碟匣沒有鎖定妥當
請取出唱碟匣，按下 ⏏（EJECT）按鈕後再將它裝進去。

4



Use the unit with the door closed completely
Otherwise, foreign matter may enter the unit and contaminate the lenses inside the changer.

Utilisez cet appareil avec la fenêtre complètement fermée
Sinon, des corps étrangers pourraient pénétrer dans l'appareil et encrasser les lentilles dans le lecteur.

Emplee la unidad con la puerta completamente cerrada
De lo contrario podrían introducirse objetos extraños y contaminar las lentes del interior del cambiador.

請完全關上門使用机器
否則，會有塵垢進入機器弄髒換碟器內部的透鏡。

Note
When a disc magazine is inserted into the CD changer or the reset button of the connected car audio is pressed, the unit will automatically be activated and read the information on the CDs. When the information on all the CDs in the disc magazine has been read, the unit will automatically stop operation.

Remarque
Quand un chargeur de disques est inséré dans le changeur de CD ou si la touche de réinitialisation de l'autoradio raccordé est enclenchée, l'appareil se met automatiquement en marche et reproduit les CD. Lorsque tous les CD du chargeur ont été reproduits, l'appareil s'arrête automatiqement.

Nota
Cuando inserta un cargador de discos en el cambiador de discos compactos, o si está pulsado el botón de reposición del equipo de audio para automóvil conectado, la unidad se activará automáticamente y leerá la información de los discos compactos. Una vez leída la información de todos los discos compactos del cargador de discos, la unidad detendrá automáticamente la operación.

註
當把唱碟匣裝入 CD 換碟器或按下了連接著的汽車音響的重調按鈕時，機器即將自動被激活（打開）並讀取 CD 上的資料。
當讀完唱碟匣中所有 CD 上的資料時，機器即將自動停止操作。

Notes on the disc magazine

- Do not leave the disc magazine in locations with high temperatures and high humidity such as on a car dashboard or in the rear window where the disc magazine will be subjected to direct sunlight.
- Do not place more than one disc at a time onto one tray, otherwise the changer and the discs may be damaged.
- Do not drop the disc magazine or subject it to a violent shock.

Remarques sur le chargeur de disques

- Ne pas laisser le chargeur de disques dans un endroit très chaud ou très humide comme sur le tableau de bord ou sur la plage arrière de la voiture où il serait en plein soleil.
- Ne pas insérer plus d'un disque à la fois sur le plateau, sinon le changeur et les disques risquent d'être endommagés.
- Ne pas laisser tomber le chargeur de disques ni le cogner.

Notas sobre el cargador de discos

- No lo deje en lugares muy húmedos o con temperaturas altas, como en el salpicadero del automóvil o en la ventanilla trasera, expuesto a la luz solar directa.
- No inserte más de un disco en una bandeja de una vez, ya que en caso contrario el cambiador y los discos pueden dañarse.
- No lo deje caer ni lo exponga a golpes violentos.

唱碟匣須知

- 不要把唱碟匣放置在高溫，高濕的地方。例如放在汽車儀錶板上或車後窗下等唱碟匣會直接照射到陽光的地方。
- 一個托盤上不要同時裝放一張以上的唱碟。否則，可能會損壞換碟器和唱碟。
- 別讓唱碟匣掉落地上或受到強烈的衝擊。

When the tray comes out

Normally, the trays will not come out of the magazine. However, if they are pulled out of the magazine, it is easy to re-insert them.

Lorsque le plateau sort

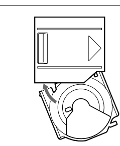
En principe, les plateaux ne sortent pas du chargeur. Toutefois, s'ils sortent du chargeur, il est facile de les réinsérer.

Si la bandeja se sale

Normalmente, las bandejas no se salen del cargador. No obstante, si esto ocurre, pueden volver a insertarse con facilidad.

脫出托盤時

通常，托盤是不會從唱碟匣中脫落的。但是萬一被拉出脫離唱碟匣，您可以很簡單地再把它裝插回去的。



With the cut-away portion of the tray facing you, insert the right corner of the tray in the slot, then push in the left corner until it clicks.

Note
Do not insert the tray upside down or in the wrong direction.

Avec la portion découpée du plateau vous faisant face, insérer le coin droit du plateau dans la fente, puis enfoncer le coin gauche jusqu'au déclic.

Remarque
Ne pas insérer le plateau à l'envers ou dans le mauvais sens.

Con la parte de corte de la bandeja hacia afuera, inserte la esquina derecha de dicha bandeja en la ranura y, a continuación, ejerza presión en la esquina izquierda hasta oír un chasquido.

Nota
No inserte la bandeja al revés o en la dirección incorrecta.

讓托盤有缺口的一邊朝著自己方向將托盤右角插入槽中，然後壓入左角至聽到卡搭聲響。

註
裝插托盤時，切勿插反了面或錯方向。

Notes on handling discs

A dirty or defective disc may cause sound drop-outs during playback. To enjoy optimum sound, handle the disc as follows.
- **Handle the disc by its edge, and to keep the disc clean, do not touch the unlabeled surface. (fig. A)**
- **Do not stick paper or tape on the disc. (fig. B)**
- **Keep your discs in their cases or disc magazines when not in use.**
  Do not expose discs to direct sunlight or heat sources such as hot air-ducts. Do not leave discs in a car parked in direct sunlight where there can be a considerable rise in the temperature inside the car. (fig. C)
- **Before playing, clean the discs with an optional cleaning cloth. Wipe each disc in the direction of the arrows. (fig. D)**
  Do not use solvents such as benzine, thinner, commercially available cleaners or antistatic spray intended for analog discs.
- **Discs with special shapes (heart-shaped discs, octagonal discs etc.) cannot be played on this unit. Attempting to do so may damage the unit. Do not use such discs.**

Notes on discs

If you use the discs explained below, the sticky residue can cause the disc to stop spinning and may cause malfunction or ruin your discs.
Do not use second-hand or rental CDs that have a sticky residue on the surface (for example from peeled-off stickers or from ink, or glue leaking from under the stickers).
- **There are paste residue. Ink is sticky. (fig. E)**
  Do not use rental CDs with old labels that are beginning to peel off.
- **Stickers that are beginning to peel away, leaving a sticky residue. (fig. F)**
  Do not use your discs with labels or stickers attached.
- **Labels are attached. (fig. G)**

Notes on CD-R discs

- **You can play CD-Rs (recordable CDs) designed for audio use on this unit (fig. H).**
- **Some CD-Rs (depending on the equipment used for its recording or the condition of the disc) may not play on this unit.**
- **You cannot play a CD-R that is not finalized*.**

* *A process necessary for a recorded CD-R disc to be played on the audio CD player.*

Remarques sur la manipulation des disques

Un disque sale ou défectueux peut provoquer des pertes de son à la lecture. Manipuler le disque comme suit pour obtenir un son optimal.
- **Manipuler le disque par son arête et le maintenir dans un état propre, ne pas le toucher sur la surface non imprimée. (fig. A)**
- **Ne pas coller de papier ou de bande adhésive sur le disque. (fig. B)**
- **Conservez vos disques dans leurs boîtiers ou des pochettes de rangement lorsqu'ils ne sont pas utilisés. Ne pas laisser les disques en plein soleil ou près d'une source de chaleur comme des conduits d'air chaud. Ne pas laisser les disques dans une voiture garée en plein soleil car la température de l'habitacle risque d'augmenter considérablement. (fig. C)**
- **Avant la lecture, essuyer les disques avec un chiffon de nettoyage en option. Essuyer chaque disque dans le sens des flèches. (fig. D)**
  Ne pas utiliser de solvants tels que de la benzine, du diluant, des produits de nettoyage vendus dans le commerce ou de vaporisateurs anti-statiques destinés aux disques analogiques.
- **Il n'est pas possible d'utiliser les disques de formes spéciales (en forme de cœur ou octogonaux, etc.) avec cet appareil. Vous risquez d'endommager l'appareil. N'essayez jamais de lire ces disques.**

Remarques sur les disques

Si vous utilisez les disques décrits ci-dessous, le résidu adhésif risque de provoquer l'arrêt de la rotation du disque et d'entraîner un dysfonctionnement ou d'endommager vos disques.
N'utilisez pas de CD de seconde main ou de location qui présentent des résidus adhésifs à la surface (par exemple d'étiquettes décollées ou d'encre, de colle dépassant de l'étiquette).
- **Résidus de colle. L'encre colle. (fig. E)**
  N'utilisez pas de CD de location avec d'anciennes étiquettes qui commencent à se décoller.
- **Les étiquettes qui commencent à se décoller laissent des résidus adhésifs. (fig. F)**
  N'utilisez pas vos disques avec des étiquettes ou des autocollants apposés dessus.
- **Les étiquettes sont fixées. (fig. G)**

Remarques sur les disques CD-R

- **Vous pouvez écouter avec cet appareil des CD-R (CD enregistrables) conçus pour une utilisation audio. (fig. H)**
- **Certains CD-R (en fonction des conditions de l'équipement d'enregistrement ou du disque) risquent de ne pas être lus avec cet appareil.**
- **Vous ne pouvez pas lire de disques CD-R non finalisés*.**

* *Un processus nécessaire à la lecture des disques CD-R enregistrés sur le lecteur de CD audio.*

Notas sobre el manejo de discos

Es posible que se produzca ausencia de sonido durante la reproducción, si el disco está sucio o es defectuoso. Para disfrutar de una calidad de sonido óptima, utilice el disco de la siguiente forma.
- **Maneje el disco por los bordes. Para mantenerlo limpio, no toque la superficie sin etiqueta (fig. A).**
- **No adhiera papeles ni cinta sobre el disco (fig. B).**
- **Guarde los discos en sus cajas o en los cargadores de discos cuando no los utilice.**
  No exponga los discos a la luz solar directa ni a fuentes térmicas, como conductos de aire caliente. No deje los discos en un automóvil aparcado bajo la luz solar directa donde pueda producirse un considerable aumento de temperatura en el interior de dicho automóvil (fig. C).
- **Antes de la reproducción, limpie los discos con un paño de limpieza opcional en la dirección de las flechas (fig. D).**
  No utilice disolventes como bencina, diluyentes, productos de limpieza disponibles en tiendas del ramo ni aerosoles antiestáticos destinados a discos analógicos.
- **Los discos con formas especiales (forma de corazón, octagonales, etc.) no pueden reproducirse en esta unidad. Si lo intenta, puede dañar la unidad. No utilice tales discos.**

Notas sobre los discos

Si emplea los discos descritos a continuación, el residuo adherente puede causar que el disco deje de girar y producir fallos de funcionamiento o dañar los discos.
No utilice discos compactos de segunda mano o de alquiler que tengan residuos adherentes en la superficie (por ejemplo, de adhesivos despegados o tinta, o de restos de pegamento de los adhesivos).
- **Residuos adherentes. Tinta adherente (fig. E).**
  No utilice discos compactos de alquiler con etiquetas viejas que estén comenzando a despegarse.
- **Adhesivos que empiezan a despegarse, dejando un residuo adherente (fig. F).**
  No emplee discos con etiquetas o adhesivos fijados.
- **Etiquetas adheridas (fig. G).**

Notas sobre discos CD-R

- **Puede reproducir discos CD-R (discos compactos grabables) diseñados para uso de audio en esta unidad (fig. H).**
- **Determinados discos CD-R (dependiendo del equipo utilizado para su grabación o la condición del disco) pueden no reproducirse en esta unidad.**
- **No es posible reproducir discos CD-R no finalizados*.**

* *Proceso necesario para reproducir en el reproductor de CD de audio los discos CD-R grabados.*

持拿光碟須知

唱碟髒了或變形，可能會在放音時發生聲音脫落現像。為保持良好的音質條件，請按照如下所述正確地拿唱碟。
- **請拿唱碟邊緣以保持唱碟清潔，不要接觸沒貼標簽的唱碟面。（圖 A）**
- **不要在唱碟上貼紙條或黏膠帶。（圖 B）**
- **在不使用光碟時，請將其放在光碟盒或光碟匣內。**
  不要讓唱碟暴露於直射陽光下或熱氣管等熱源旁邊，也不要把唱碟放在停駐在炎陽下的汽車裡，因為那裡會升到很高的溫度。（圖 C）
- **放音前，請用選購件的清潔用布擦拭乾淨唱碟，如圖所示應沿箭頭所指方向擦拭。（圖 D）**
  不可利用油精，稀疏劑，市售的清潔劑或摸擬式唱碟用的抗靜電噴射劑等溶劑清潔唱碟。
- **特殊形狀的光碟（心形光碟，八邊形光碟等）不能在本機上播放。否則會損壞本機。切勿使用此類光碟。**

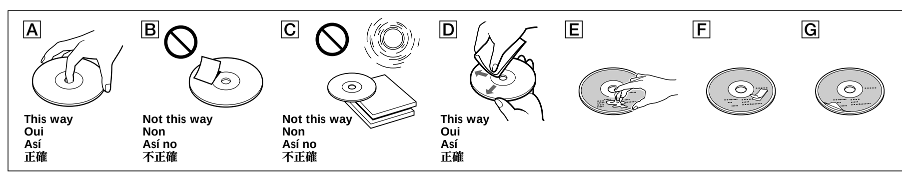
唱碟須知

若使用以下說明中的光碟，粘性殘留物會造成光碟停止旋轉，並會導致機器故障或毀壞光碟。
注意別使用表面殘留有黏膠液的二手舊唱碟或出租的 CD 唱碟（例如撕掉了標籤的位置，印墨，新貼標籤邊緣溢出的多餘黏膠液）。
- **有未乾印墨或殘餘黏膠糊。（圖 E）**
  別用那老標籤被剝離的出阻 CD 唱碟。
- **標籤部分剝離，留下黏性膠糊。（圖 F）**
  請勿使用表面附有說明文字或標貼的光碟。
- **附貼標籤。（圖 G）**

CD-R 唱碟須知

- **您可以在本唱機（圖 H）上播放為音頻使用而設計的 CD-R（可錄音 CD）。**
- **某些 CD-R （取決于錄音時所用的設備或唱碟本身的情況）不能用本唱機播放。**
- **未完成的 CD-R 是不能播放的＊。**

＊ *在音頻 CD 播放機上播放已錄音的 CD-R 唱碟所必需的程序。*



Look for this mark to distinguish CD-Rs for audio use.
Ce symbole permet de distinguer les CD-R conçus pour une utilisation audio.
Busque esta marca para distinguir los discos CD-R para uso de audio.
尋找此符號來辨認音頻 CD-R。

This mark denotes that a disc is not for audio use.
Ce symbole indique qu'un disque n'est pas conçu pour une utilisation audio.
Esta marca indica que el disco no es para uso de audio.
此符號表示該唱碟為非音頻唱機。

Installation

Precautions

- Choose the mounting location carefully, observing the following:
  - — The unit is not subject to temperatures exceeding 55°C (131°F) (such as in a car parked in direct sunlight).
  - — The unit is not subject to direct sunlight.
  - — The unit is not near heat sources (such as heaters).
  - — The unit is not exposed to rain or moisture.
  - — The unit is not exposed to excessive dust or dirt.
  - — The unit is not subject to excessive vibration.
  - — The fuel tank should not be damaged by the tapping screws.
  - — There should be no wire harnesses or pipes under the place where you are going to install the unit.
  - — The spare tire, tools or other equipment in or under the trunk should not be interfered with or damaged by the screws or the unit itself.
- Be sure to use only the supplied mounting hardware for a safe and secure installation.
- Use only the supplied screws.
- Make holes of ø 3.5 mm (5/32 in.) only after making sure there is nothing on the other side of the mounting surface.

Installation

Précautions

- Choisir l’emplacement de montage en tenant compte des observations suivantes:
  - — Appareil non soumis à des températures dépassant 55°C (131°F) (comme dans une voiture parquée au soleil).
  - — Appareil non soumis au rayonnement solaire direct.
  - — Appareil à l’écart de sources de chaleur (comme des radiateurs).
  - — Appareil non exposé à la pluie ou à l’humidité.
  - — Appareil non exposé à des poussières ou à des souillures en excès.
  - — Appareil non exposé à des vibrations excessives.
  - — Vérifier que le réservoir d’essence ne risque pas d’être endommagé par les vis taraudeuses.
  - — Il ne doit pas y avoir de faisceau de fils ou de tuyaux à l’emplacement du montage.
  - — Vérifier que l’appareil ou les vis ne risquent pas d’endommager ou de gêner la roue de secours, les outils, ou autre objet dans le coffre.
- Pour garantir la sécurité de l’installation, utiliser uniquement le matériel de montage fourni.
- Utilisez uniquement les vis fournies.
- Ne percez les trous de 3,5 mm (5/32 po.)ø qu'après vous être assuré qu'il n'y avait rien de l'autre côté de la surface de montage.

Instalación

Precauciones

- Elija cuidadosamente el lugar de montaje y tenga en cuenta lo siguiente:
  - — La unidad no queda sometida a temperaturas superiores a los 55°C (como en un automóvil aparcado a la luz solar directa).
  - — La unidad no queda sometida a la luz solar directa.
  - — La unidad no queda cercana a fuentes térmicas (como aparatos de calefacción).
  - — La unidad no queda expuesta a la lluvia o a la humedad.
  - — La unidad no queda expuesta a polvo o suciedad excesivos.
  - — La unidad no queda sometida a vibraciones excesivas.
  - — El depósito de combustible no deberá dañarse con los tornillos autorroscantes.
  - — No deberá haber mazos de conductores ni tubos debajo del lugar donde vaya a instalar la unidad.
  - — La rueda de repuesto, las herramientas, u otros equipos situados dentro o debajo del portaequipajes no deberán verse interferidos ni dañados por los tornillos ni por la propia unidad.
- Para realizar una instalación segura, emplee solamente la ferretería de montaje suministrada.
- Utilice sólo los tornillos suministrados.
- Antes de hacer los orificios de ø 3,5 mm, compruebe que no haya nada en el otro lado de la superficie de montaje.

安裝

使用前須注意

- 請參照下列各項仔細選擇安裝位置：
  - — 機器不能遭受超過 55°C 的溫度（例如停駐於炎陽下的汽車內）。
  - — 機器不可直接照射到陽光。
  - — 機器不可靠近熱源（例如加熱器等）。
  - — 不要讓機器暴露雨中或潮濕處。
  - — 不要把機器放在多塵或污穢的地方。
  - — 別讓機器受到強烈的震動。
  - — 小心別讓攻絲螺釘鑽傷了燃油箱。
  - — 注意安裝機器位置下面不要有電線束或配管。
  - — 行李箱中或下面的備胎，工具或其他設備的取存不可受到機器的安裝螺釘或機器本身的干擾或損傷。
- 為了安裝確實和安全，請限使用附帶的安裝五金件。
- 限使用附帶的螺絲釘。
- 務請在確認安裝面的另一側沒有任何其他物品之後開 ø 3.5 mm 的孔。

How to install the unit

The brackets ① provide two positions for mounting, high and low. Use the appropriate screw holes according to your preference.

Installation de l’appareil

Les supports ① offrent deux positions de montage, haut et bas. Utilisez les trous de vissage appropriés en fonction de vos préférences.

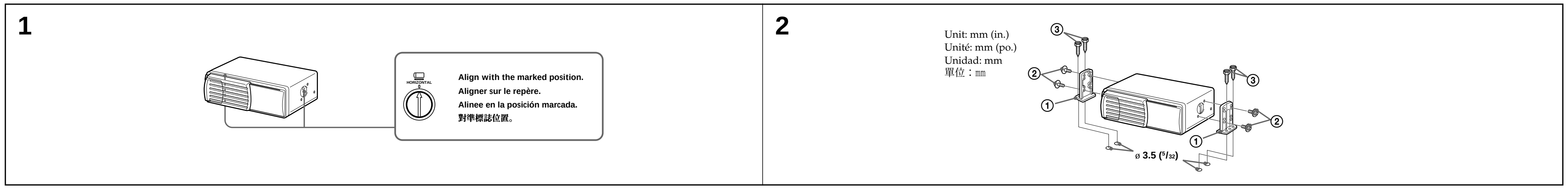
Instalación de la unidad

Los soportes ① proporcionan dos posiciones de montaje, alta y baja. Utilice los orificios para tornillo apropiados según sus preferencias.

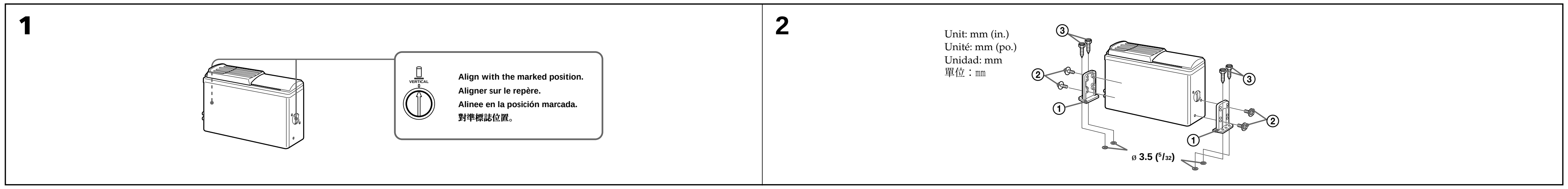
如何安裝機器

支架①提供了兩種安裝位置，高和低。跟据您的考慮，請使用合適的螺孔。

Horizontal installation / Installation horizontale / Instalación horizontal / 水平安裝



Vertical installation / Installation verticale / Instalación vertical / 豎直安裝



Suspended installation

When the unit is to be installed under the rear tray etc. in the trunk compartment, make sure the following provisions are made.

- Choose the mounting location carefully so that the unit can be installed horizontally.
- Make sure the unit does not hinder the movement of the torsion bar spring etc. of the trunk lid.

Installation suspendue

Si l’appareil doit être installé sous la plage arrière dans le coffre, par exemple, observer les précautions suivantes.

- Bien choisir l’emplacement pour pouvoir installer l’appareil à l’horizontale.
- Vérifier que l’appareil ne gêne pas les mouvements du ressort de fermeture du coffre, entre autres.

Instalación suspendida

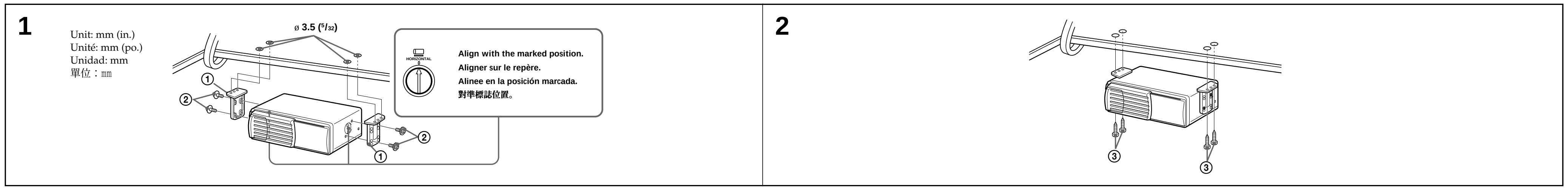
Si va a instalar la unidad debajo de la bandeja trasera, etc., del maletero, tenga en cuenta lo siguiente.

- Elija el lugar de montaje cuidadosamente de forma que sea posible instalar la unidad horizontalmente.
- Asegúrese de que la unidad no dificulta el movimiento del muelle de la barra de torsión, etc., de la tapa del maletero.

懸掛安裝

機器安裝在後行李箱托架下面等位置時，必須作好如下的準備。

- 小心地選擇能水平地安裝機器的位置。
- 確認機器是否不會阻撓後行李箱蓋的扭桿彈簧等。



Inclined installation

After installing the unit, align the dials with one of the marks so that the arrows are as vertical as possible.

Installation inclinée

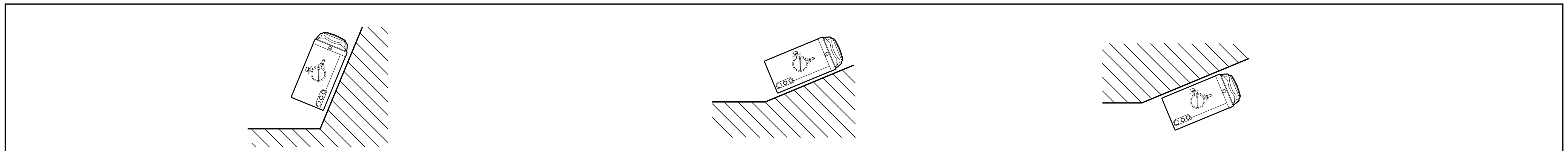
Après avoir installé l’appareil, alignez les disques sur un repère de façon à ce que les flèches soient dans la position la plus verticale possible.

Instalación inclinada

Una vez instalada la unidad, alinee los diales de forma que una de las marcas de las flechas se encuentre en la posición más vertical posible.

傾斜安裝

安裝好機器之後，請旋轉度盤對準標誌中的一個使箭頭盡可能呈垂直方向的位置。



Note
Be sure to align the left and right dials with the same mark.

Remarque
Veillez á aligner les disques gauche et droite sur le même repère.

Nota
Asegúrese de alinear los diales izquierdo y derecho con la misma marca.

註
左、右度盤一定都要對準同一標誌。

Connections/Connexions/Conexiones/連接

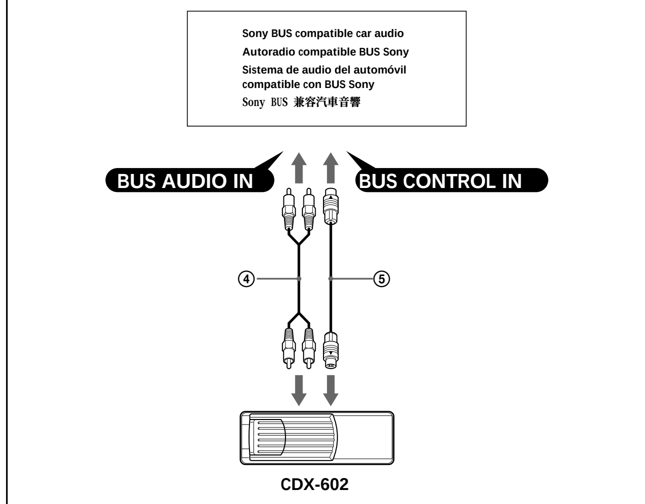
For details, refer to the Installation/Connections manual of the car audio.

Pour plus de détails, consulter le manuel d’installation/connexions de l’autoradio.

Con respecto a los detalles, consulte el manual de instalación/conexiones del sistema de audio del automóvil.

詳細請參考汽車音響的安裝／連接說明。

Connection diagram/Schéma de connexion/Diagrama de conexión/接線圖



Note
For connecting two or more changers, the XA-C30 source selector (optional) is necessary.

Remarque
Pour raccorder deux ou plusieurs changeurs, le sélecteur de source XA-C30 (en option) est nécessaire.

Nota
Si desea conectar dos o más cambiadores, es preciso utilizar un selector de fuente XA-C30 (opcional).

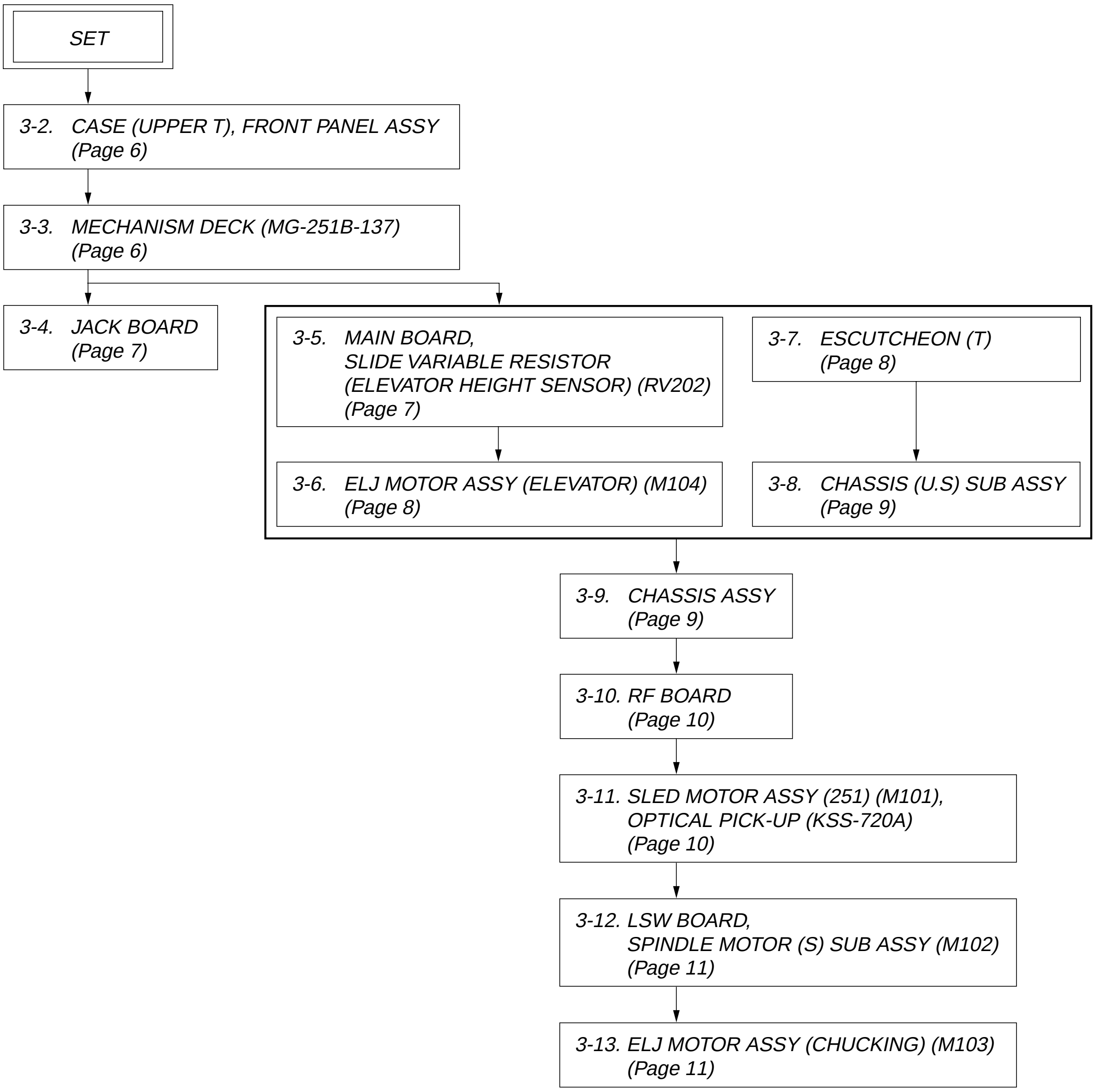
註
要連接兩個以上的換碟器時，您便須利用 XA-C30 聲源選擇器 （選購件）。

SECTION 3
DISASSEMBLY

• This set can be disassembled in the order shown below.

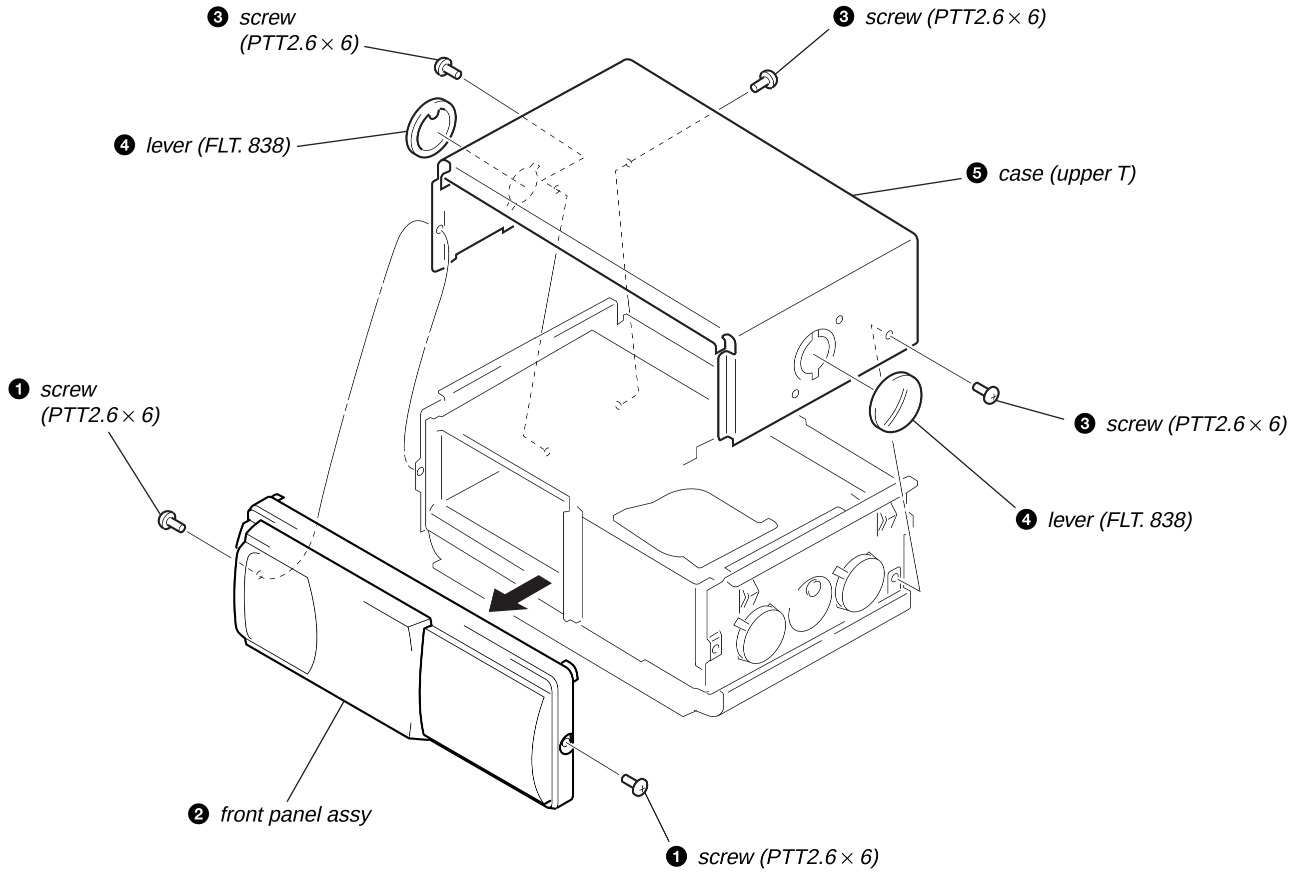
3-1. DISASSEMBLY FLOW

Note 1: *The process described in* ▤ *can be performed in any order.*
Note 2: *Without completing the process described in* ▤ *, the next process can not be performed.*

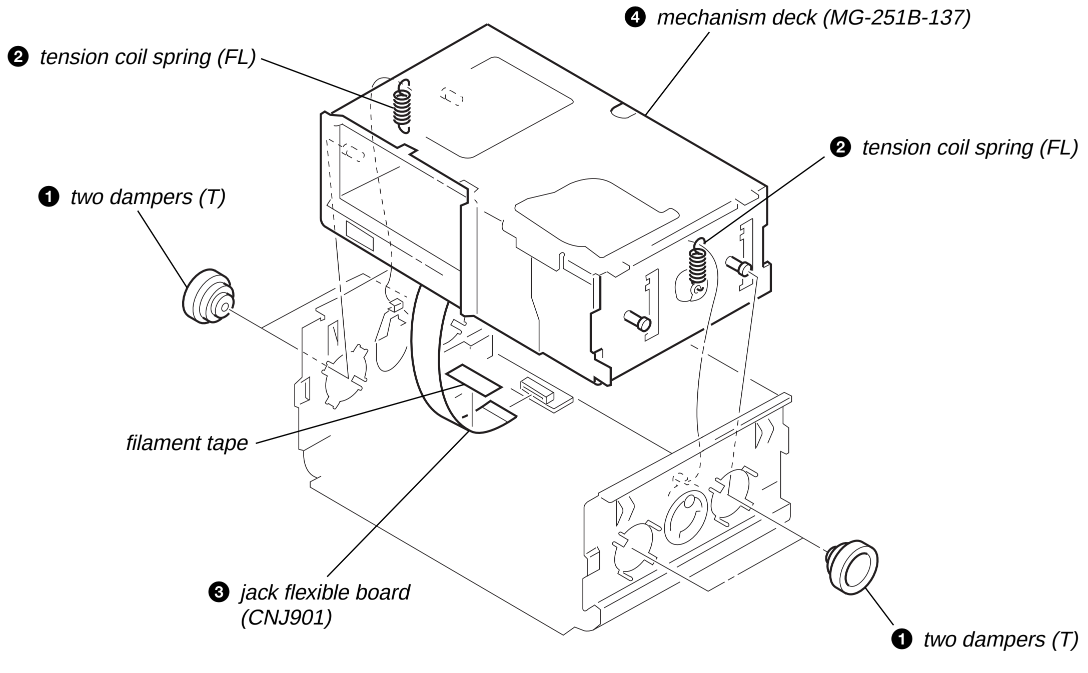


Note: Follow the disassembly procedure in the numerical order given.

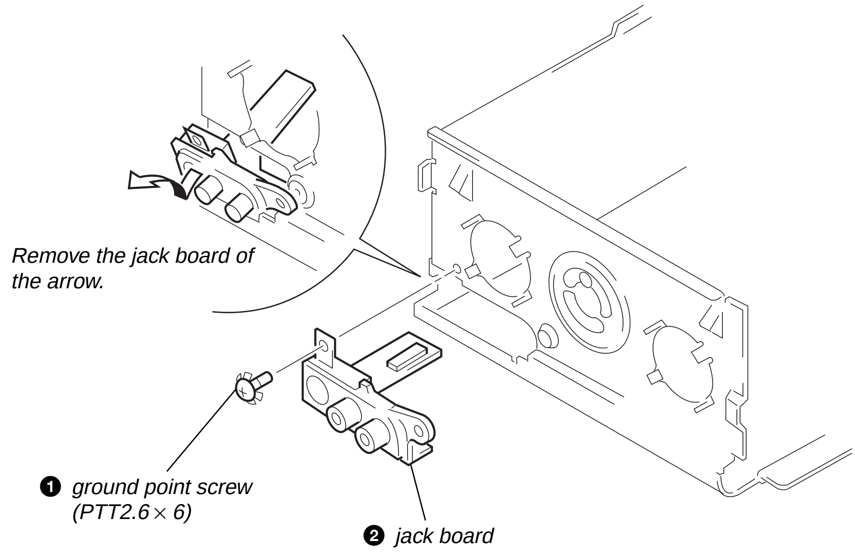
3-2. CASE (UPPER T), FRONT PANEL ASSY



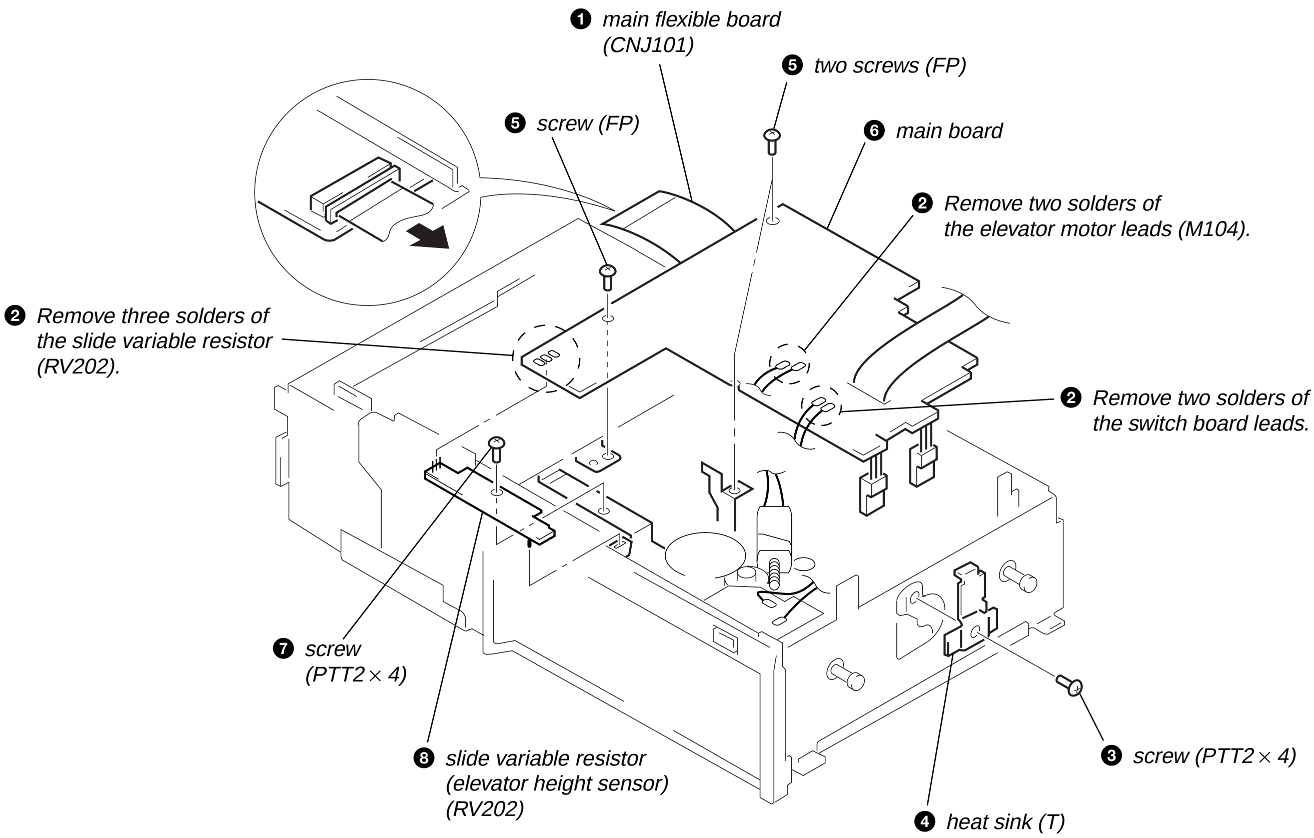
3-3. MECHANISM DECK (MG-251B-137)



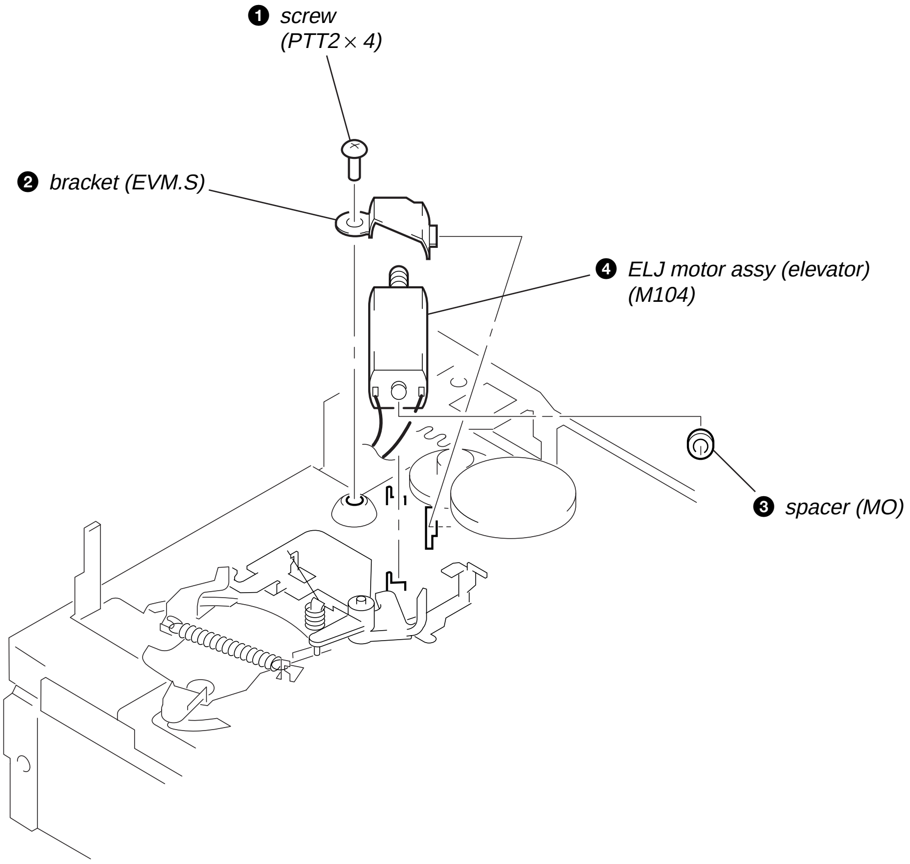
3-4. JACK BOARD



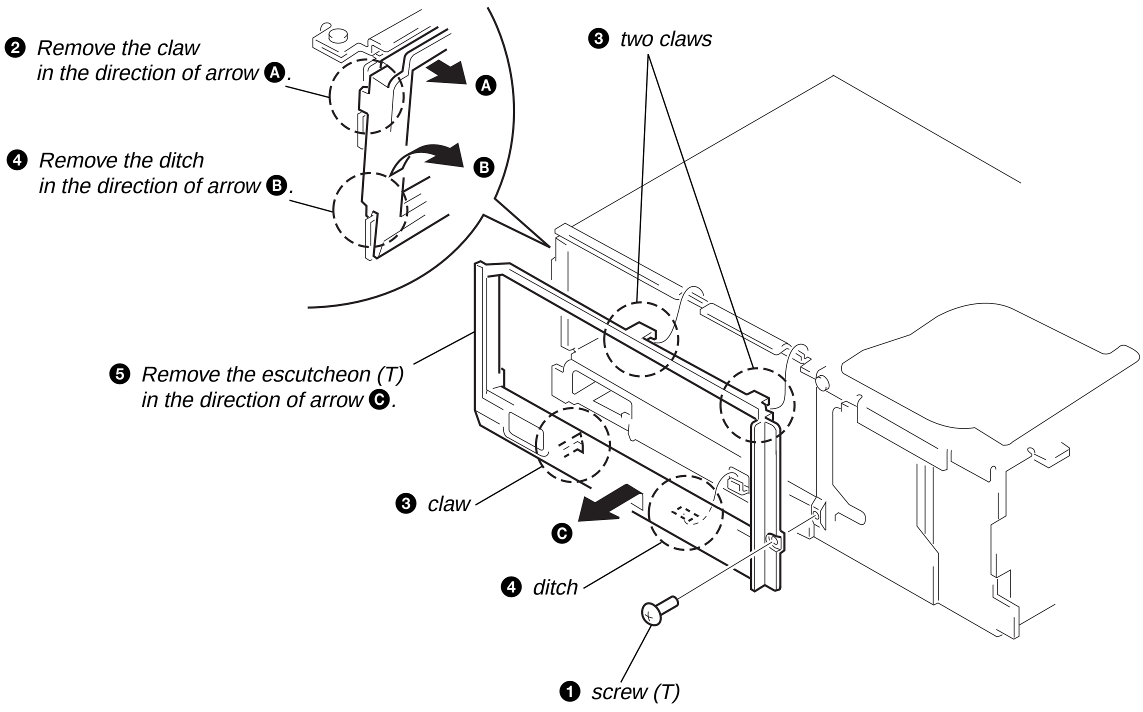
3-5. MAIN BOARD, SLIDE VARIABLE RESISTOR (ELEVATOR HEIGHT SENSOR) (RV202)



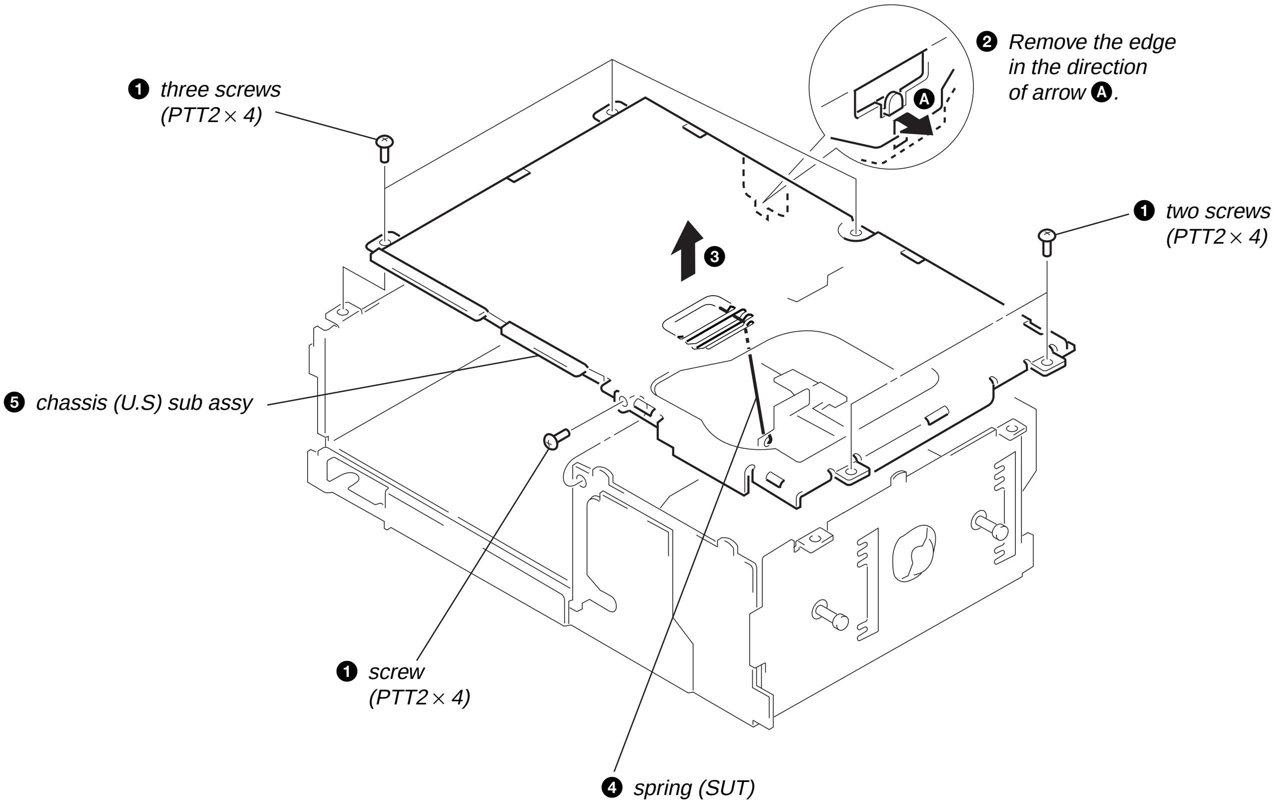
3-6. ELJ MOTOR ASSY (ELEVATOR) (M104)



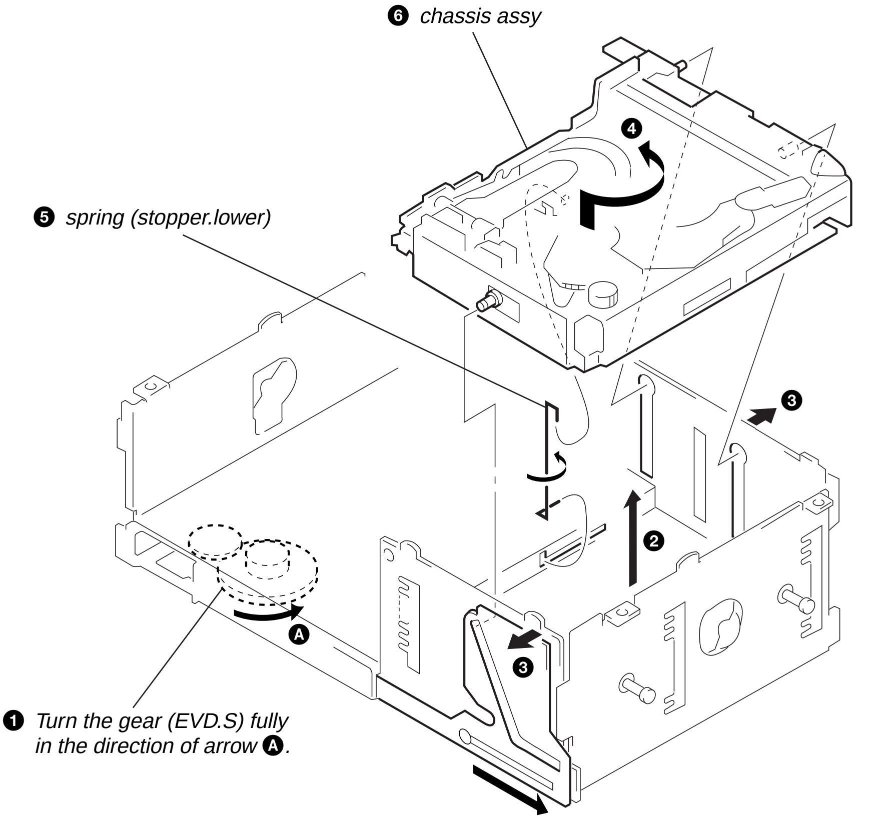
3-7. ESCUTCHEON (T)



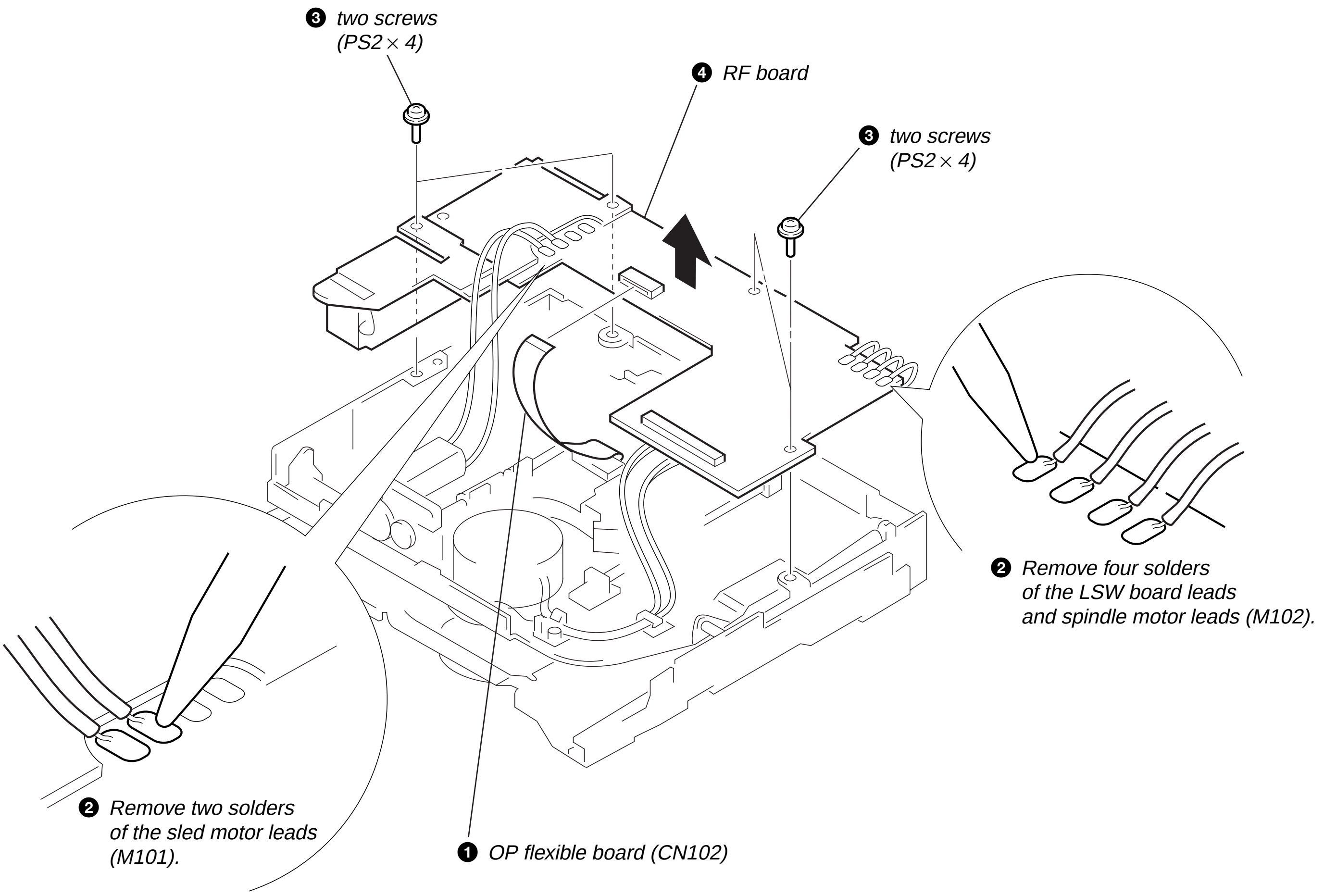
3-8. CHASSIS (U.S) SUB ASSY



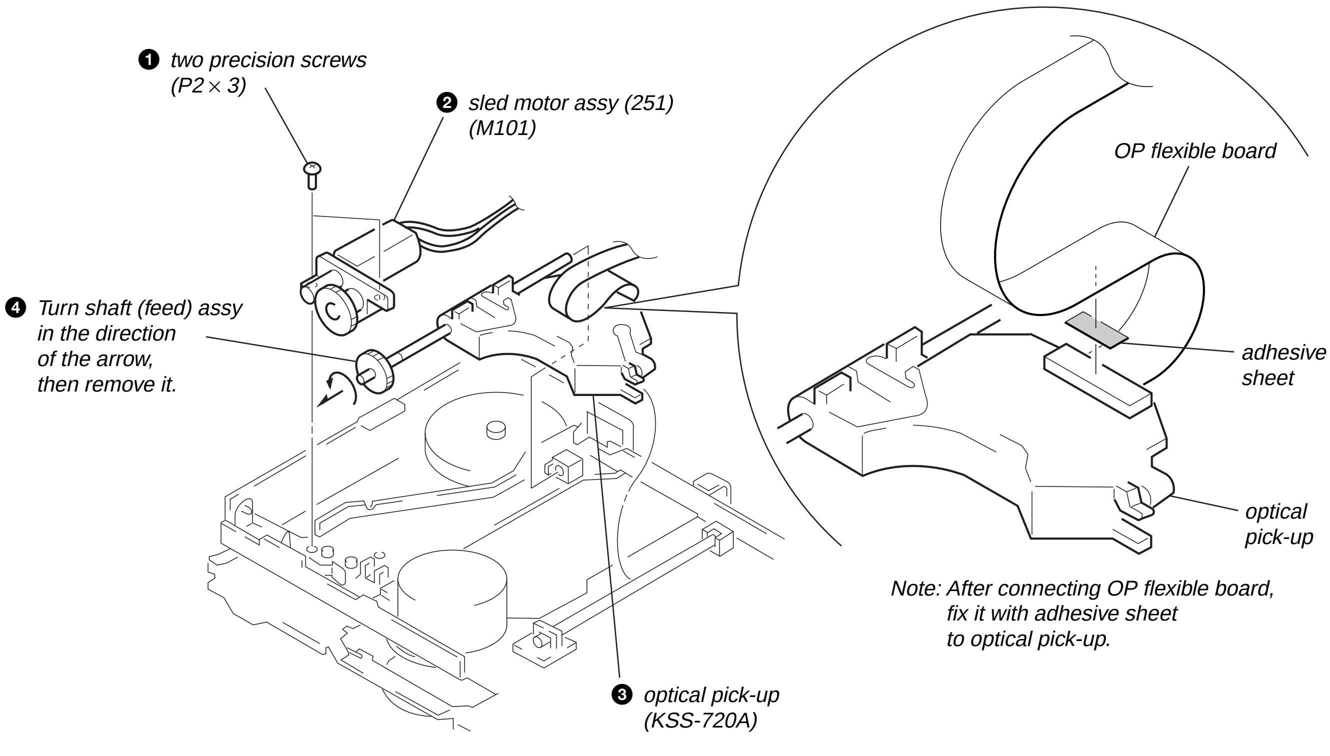
3-9. CHASSIS ASSY



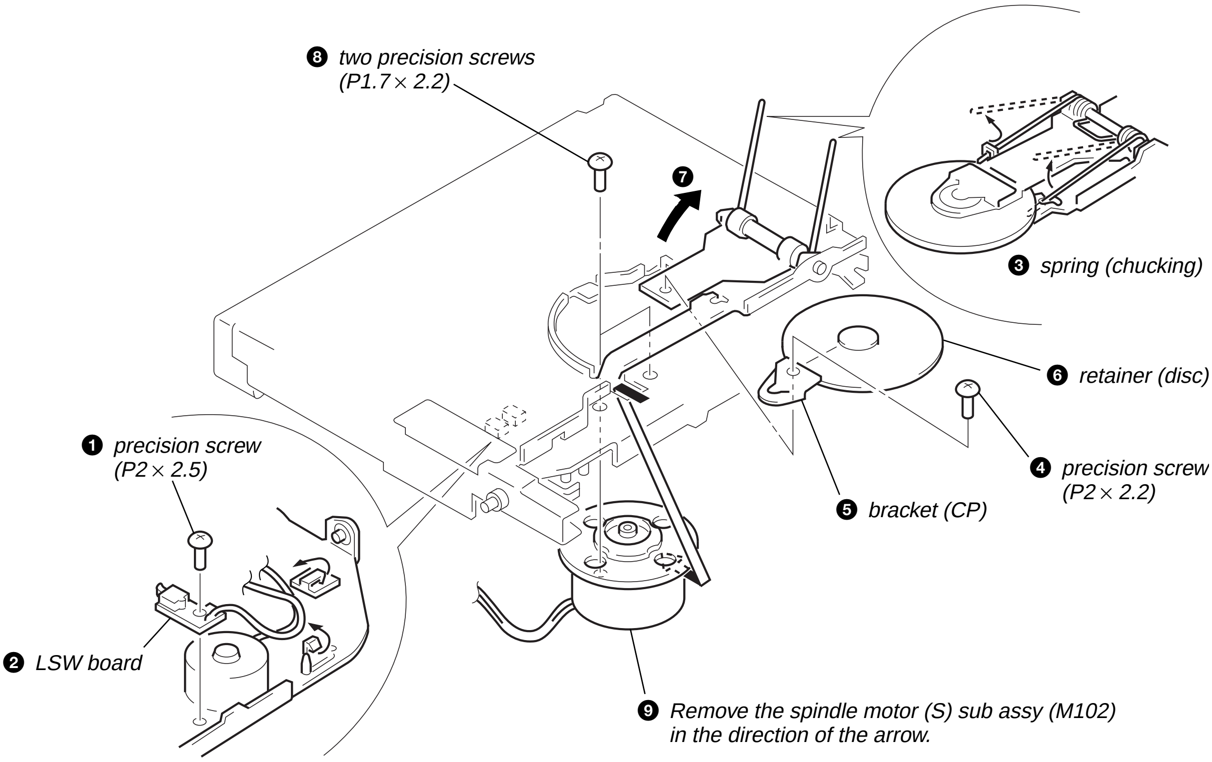
3-10. RF BOARD



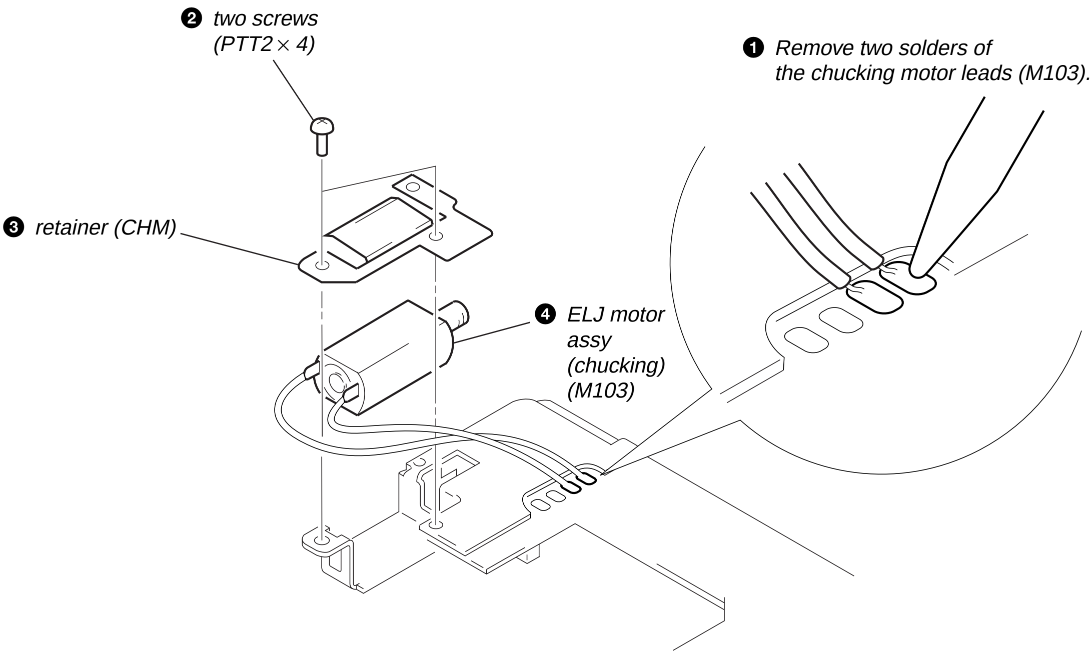
3-11. SLED MOTOR ASSY (251) (M101), OPTICAL PICK-UP (KSS-720A)



3-12. LSW BOARD, SPINDLE MOTOR (S) SUB ASSY (M102)



3-13. ELJ MOTOR ASSY (CHUCKING) (M103)



SECTION 4
ASSEMBLY

• This set can be assembled in the order shown below.

4-1. ASSEMBLY FLOW

4-2. OPTICAL PICK-UP COMPLETE ASSY (Page 12)

↓

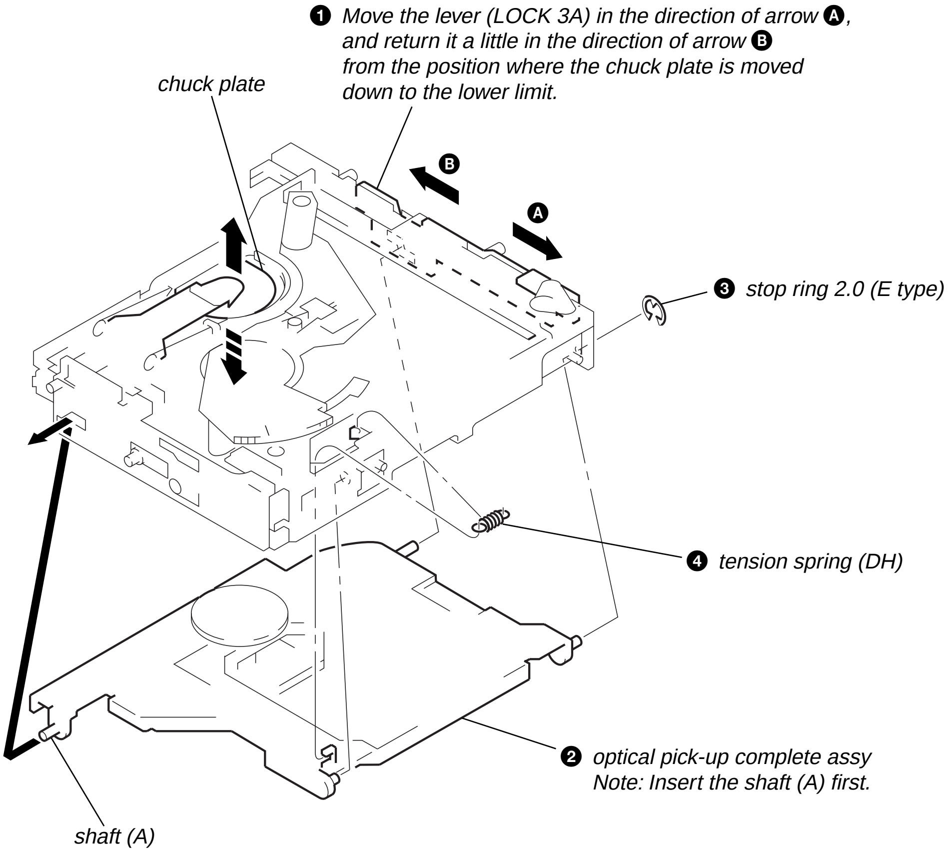
4-3. GEAR (LOMINI)/(LOAD CAM) ASSY (Page 13)

↓

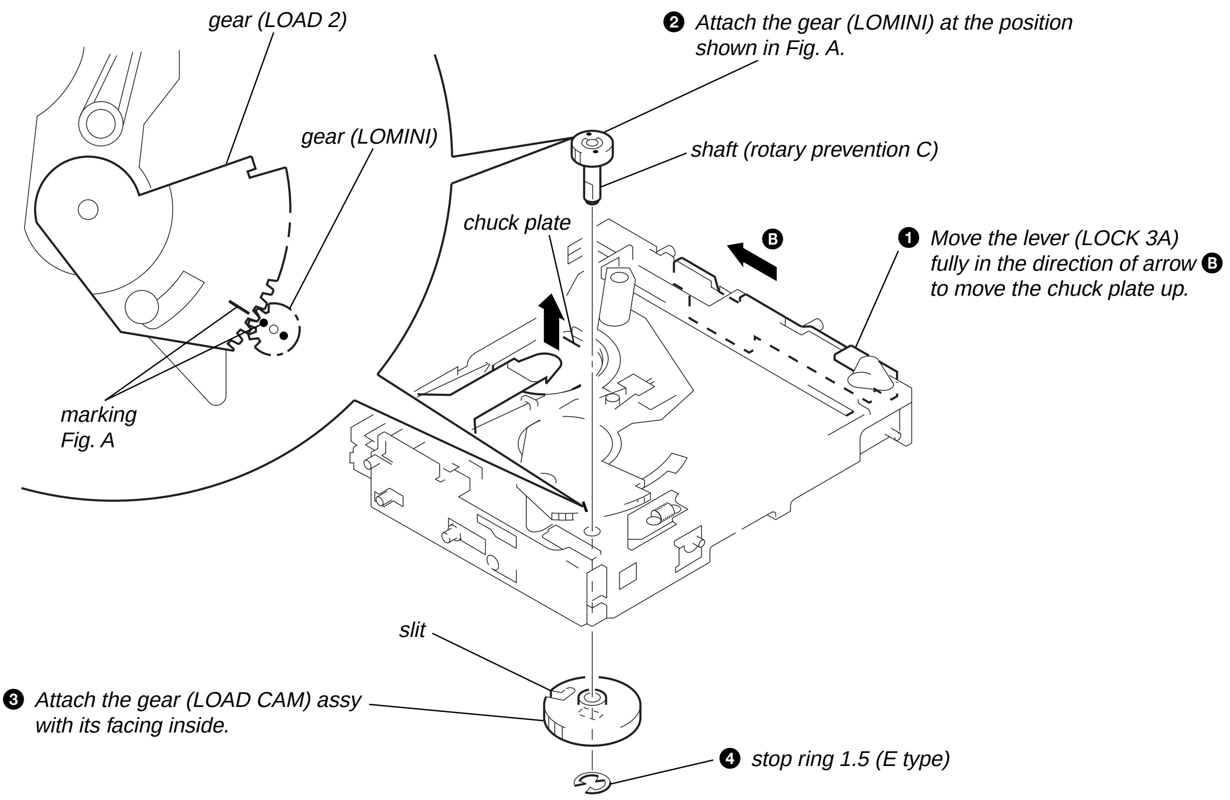
4-4. OPERATION CHECK (Page 13)

Note: Follow the assembly procedure in the numerical order given.

4-2. OPTICAL PICK-UP COMPLETE ASSY

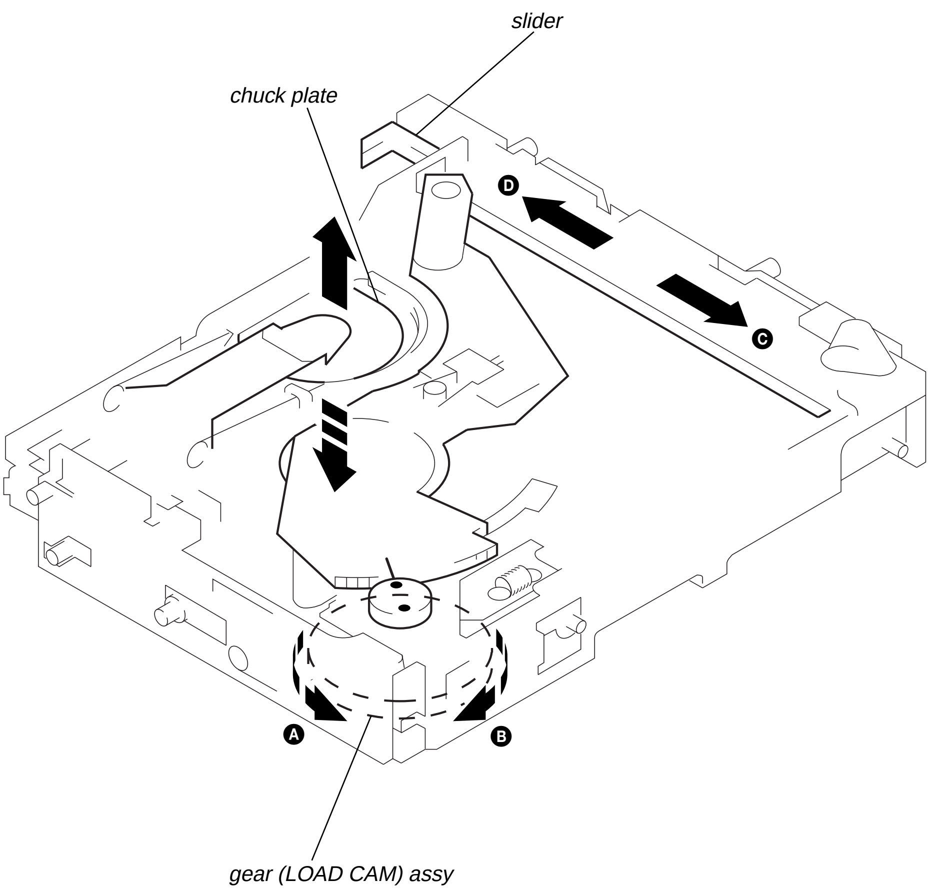


4-3. GEAR (LOMINI)/(LOAD CAM) ASSY



4-4. OPERATION CHECK

❶ Confirm that the slider moves in the direction of arrow C to move down the chuck plate if the gear (LOAD CAM) is rotated in the direction of arrow A or the chuck plate moves up and the slider moves in the direction of arrow D if the gear is rotated in the direction of arrow B.

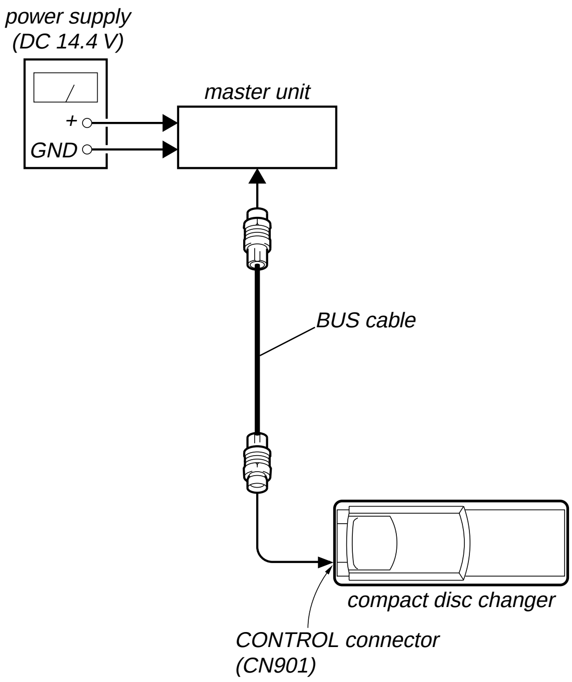


SECTION 5
MECHANICAL ADJUSTMENT

• Elevator Height (Address) Adjustment

Note: This adjustments is necessary when the system controller (IC201), variable resistor (RV201), slider (R), slider (L), or chassis (ELV) was replaced for any repair.

Connection:



Adjustment Method:

1. Connect this set to the master unit (e.g. MDX-C7970/C7970R), load a disc magazine, and place the set vertically as shown below.

2. Connect the regulated power supply to the master unit, and turn the power on.

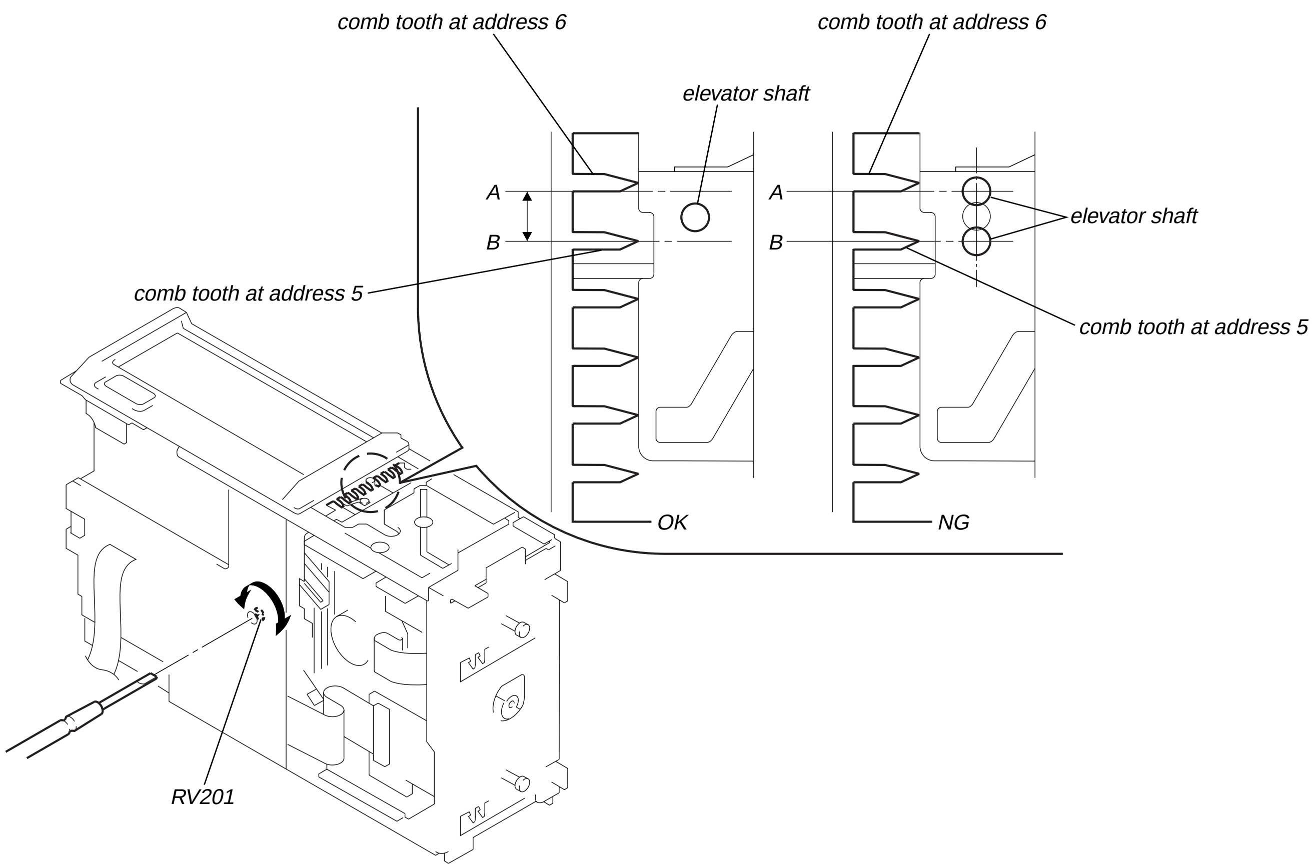
3. Press the DISC button on the master unit and select DISC 5.

4. At this time, if the elevator shaft does not position between comb teeth A and B at addresses 5 and 6 as shown below, adjust the following.

5. Press repeatedly the DISC + and – buttons on the master unit so that the elevator shafts moves from address 6 to address 5, or from 5 to 6. At this time, adjust RV201 on the main board so that the elevator shaft positions smoothly between comb teeth A and B.

6. Further, place the set horizontally and make same adjustment as mentioned above.

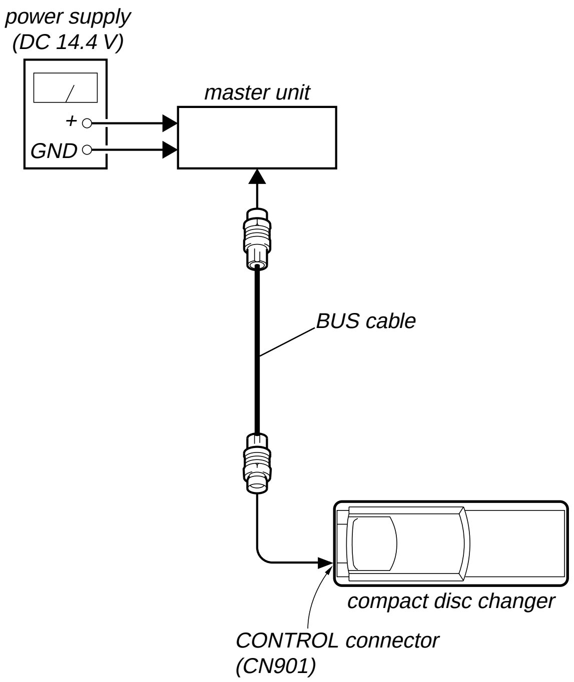
7. After adjustment at addresses 5 to 6 is finished, check all operations from addresses 1 to 10 with the set placed vertically and horizontally respectively to confirm that the elevator shaft positions in a range between comb teeth A to B.



SECTION 6
ELECTRICAL CHECK

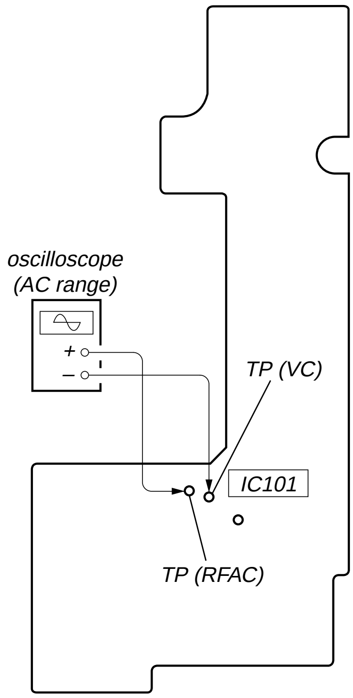
Note:
1. This check is performed with the set placed horizontally.
2. Power supply voltage: DC14.4 V (more than 3 A).
3. Be sure to use the disc "YEDS-18" parts code: 3-702-101-01, but only when indicated.

Connection:



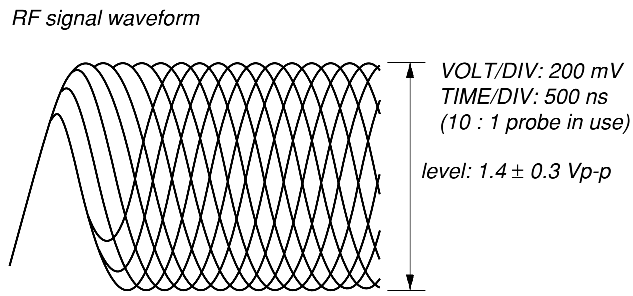
Focus Bias Check

Connection:
– RF Board (Component Side) –



Procedure:
1. Connect the oscilloscope to TP (RFAC) and TP (VC) on the RF board.
2. Put the set into play mode by loading the disc (YEDS-18).
3. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

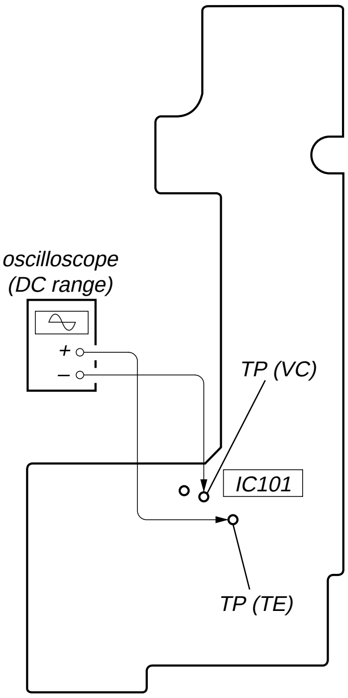
Note:
Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.



When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

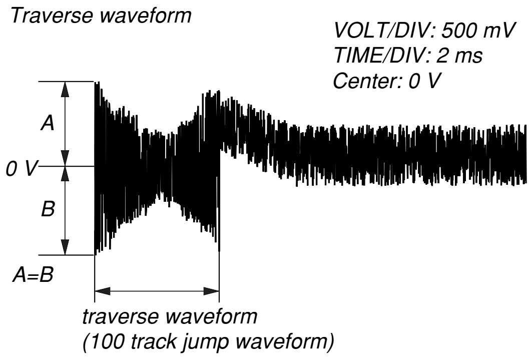
Tracking Offset Check

Connection:
– RF Board (Component Side) –



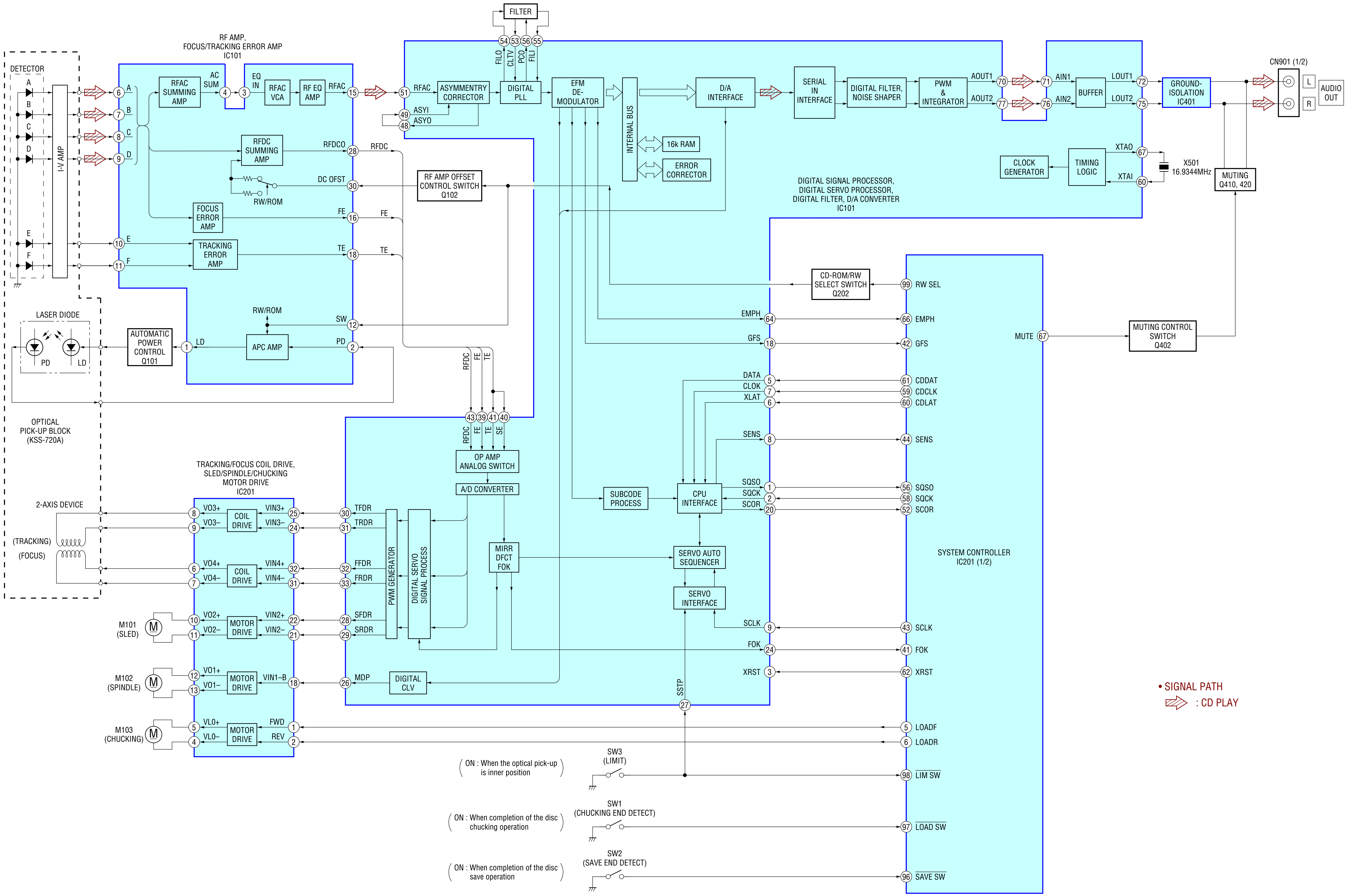
Procedure:
1. Connect the oscilloscope to TP (TE) and TP (VC) on the RF board.
2. Put the set into play mode by loading the disc (YEDS-18).
3. Press the ⏮ AMS ⏭ button on the master unit, and check the traverse waveform*.
4. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V dc, and check this level.

* Traverse waveform: This is the tracking error wave form appears when crossing the track.

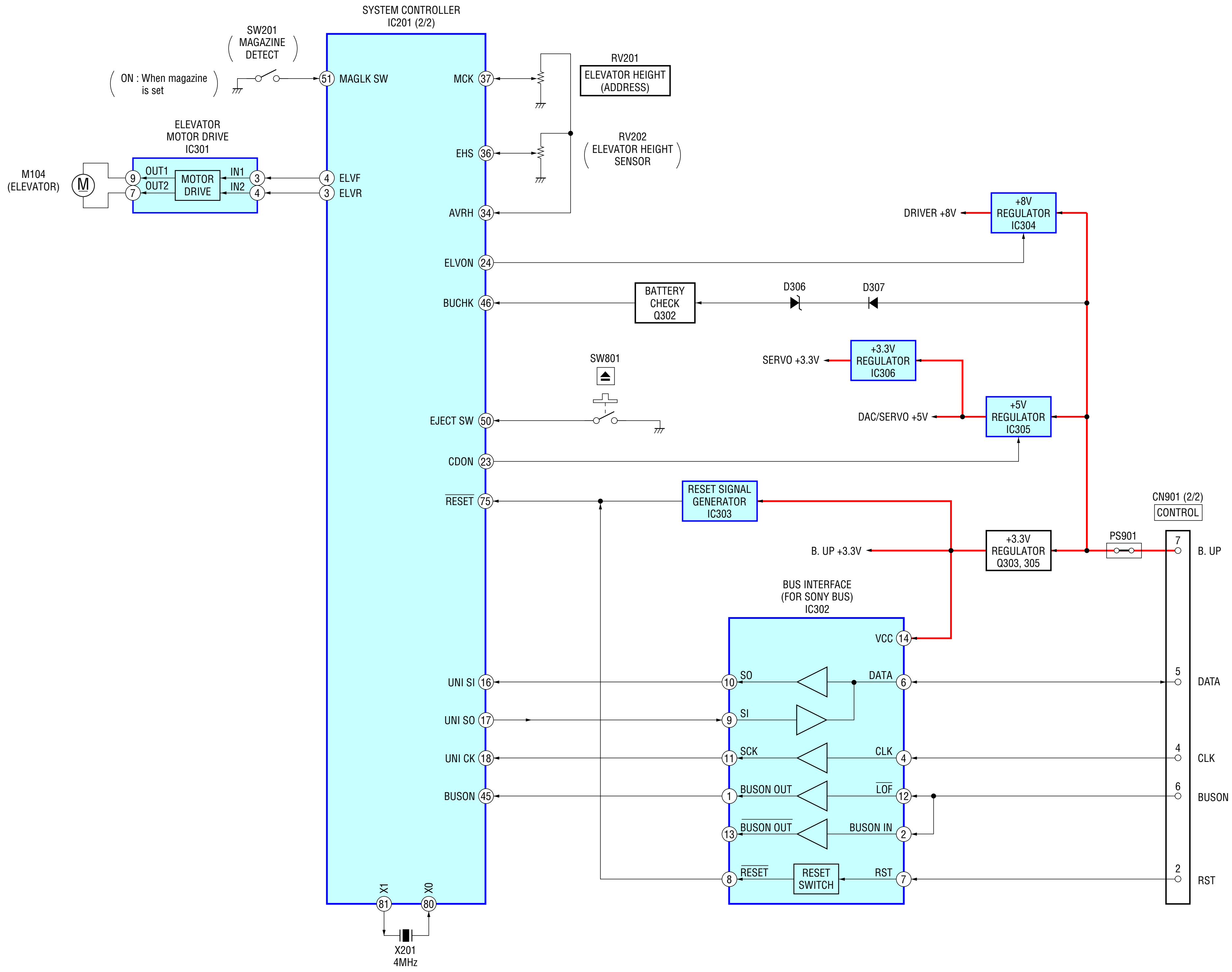


SECTION 7
DIAGRAMS

7-1. BLOCK DIAGRAM – SERVO Section –



7-2. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



7-3. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:
- o——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- (green) : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

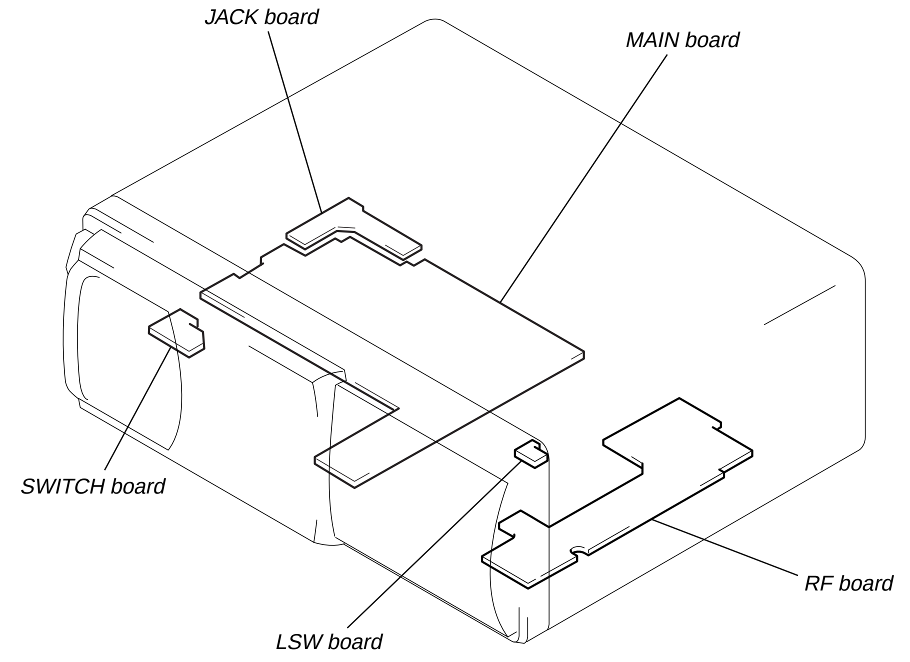
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from CD changer controller.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY

- **Circuit Boards Location**

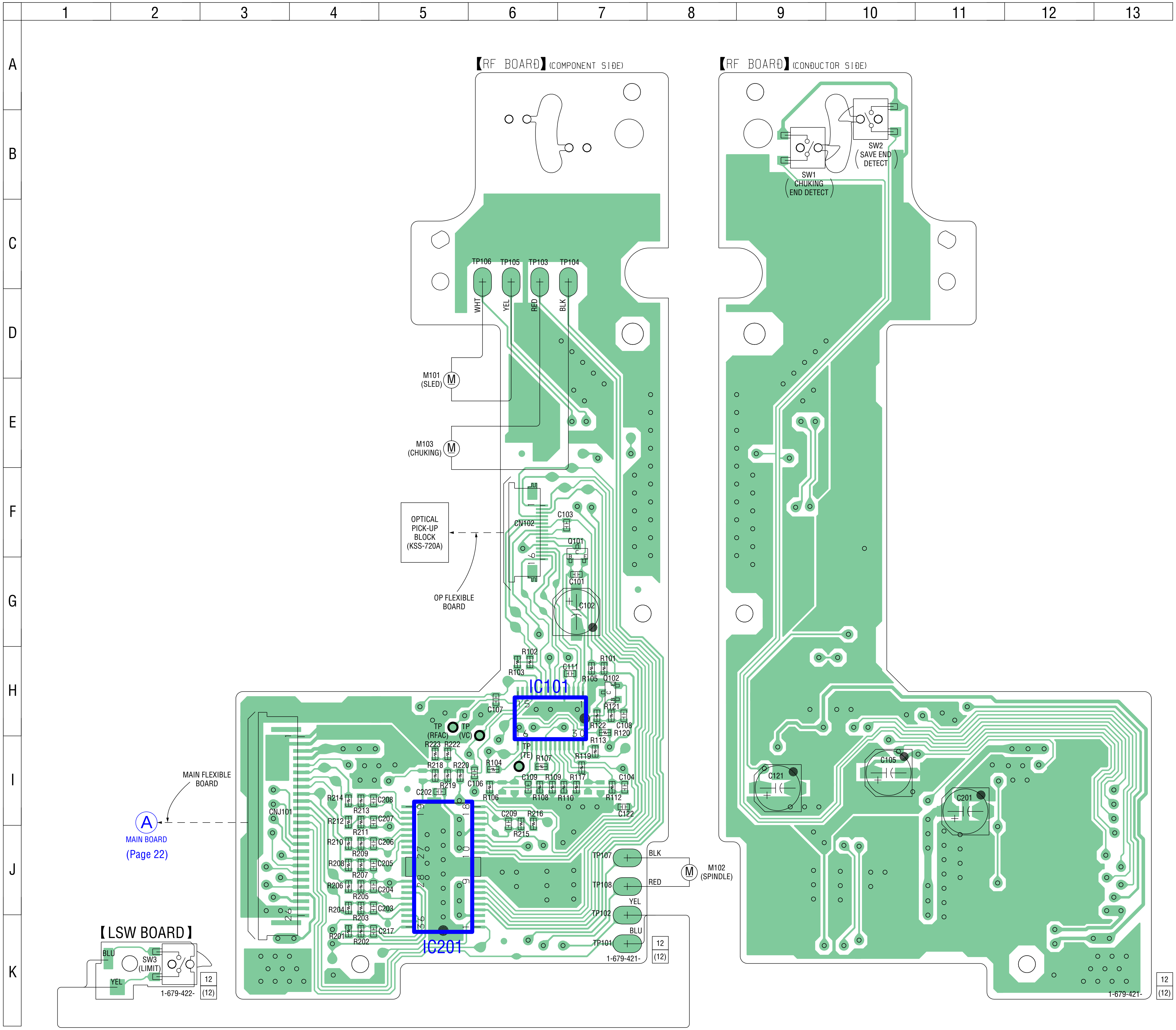


7-4. PRINTED WIRING BOARDS – RF/LSW Boards –

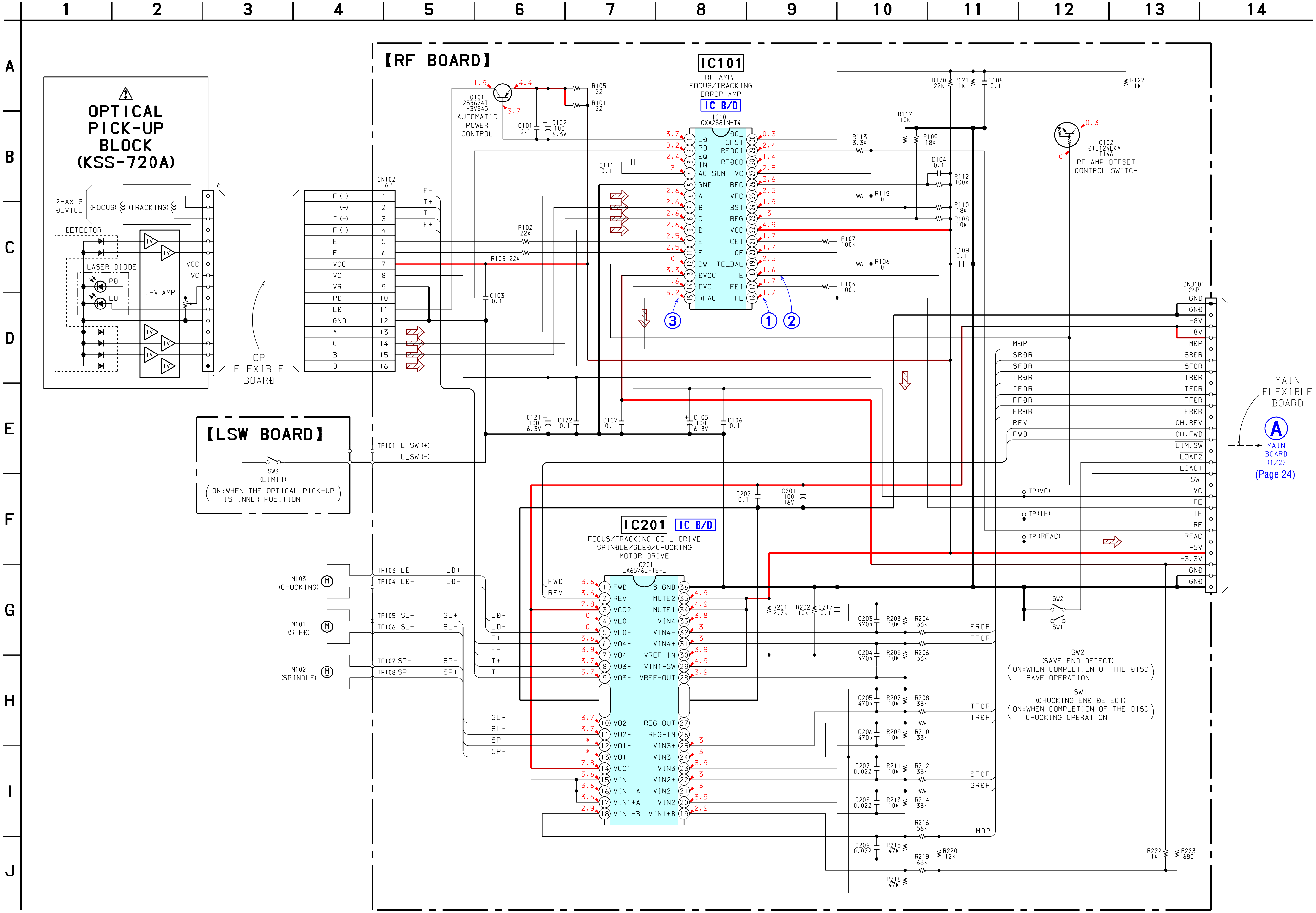
• See page 19 for Circuit Boards Location.

- **Semiconductor Location**

Ref. No.	Location
IC101	H-6
IC201	J-5
Q101	F-7
Q102	H-7



7-5. SCHEMATIC DIAGRAM – RF/LSW Boards – • See page 27 for for Waveforms. • See page 28 for IC Block Diagrams.



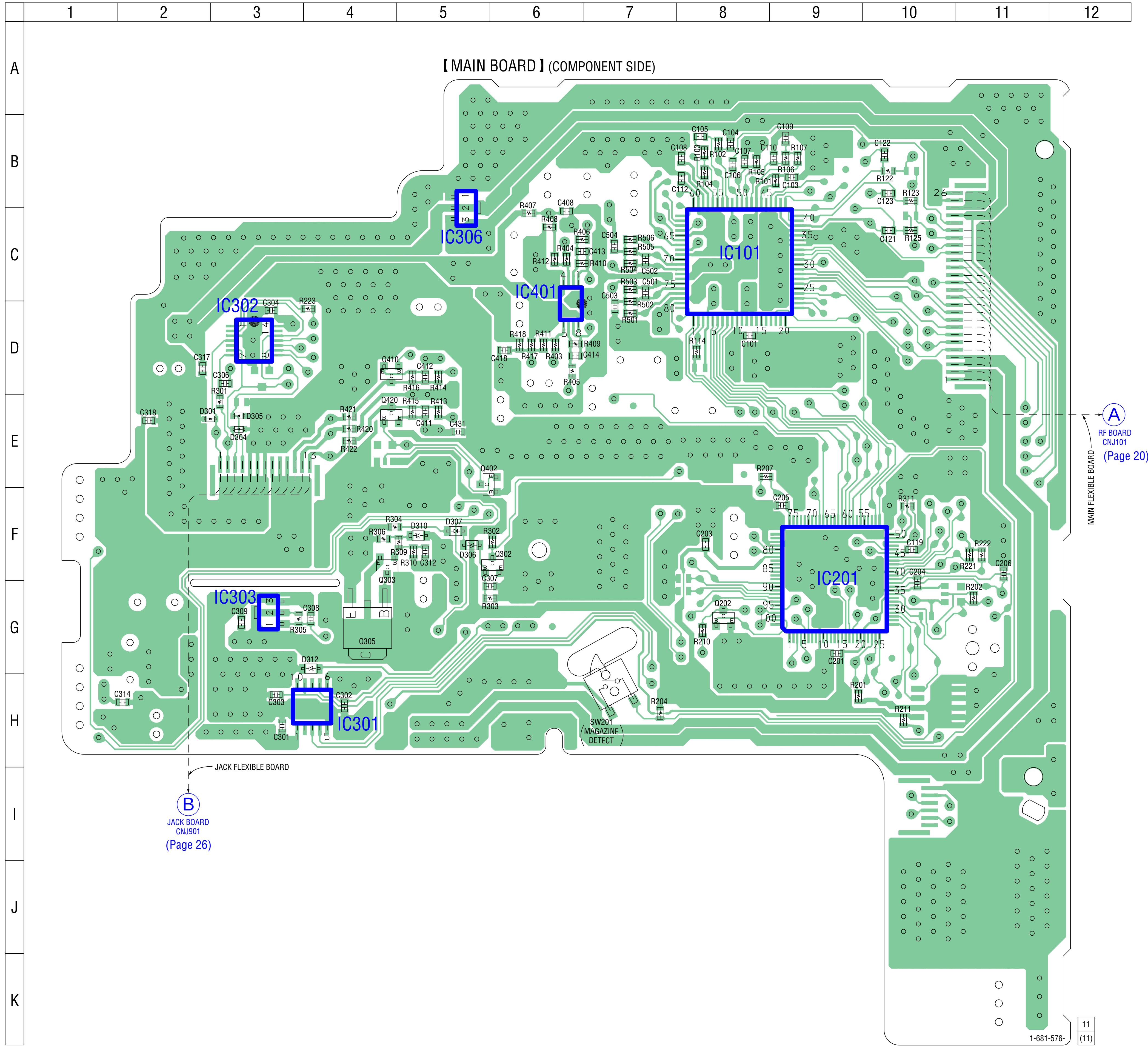
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-6. PRINTED WIRING BOARDS – MAIN Board (Component Side) –

• See page 19 for Circuit Boards Location.

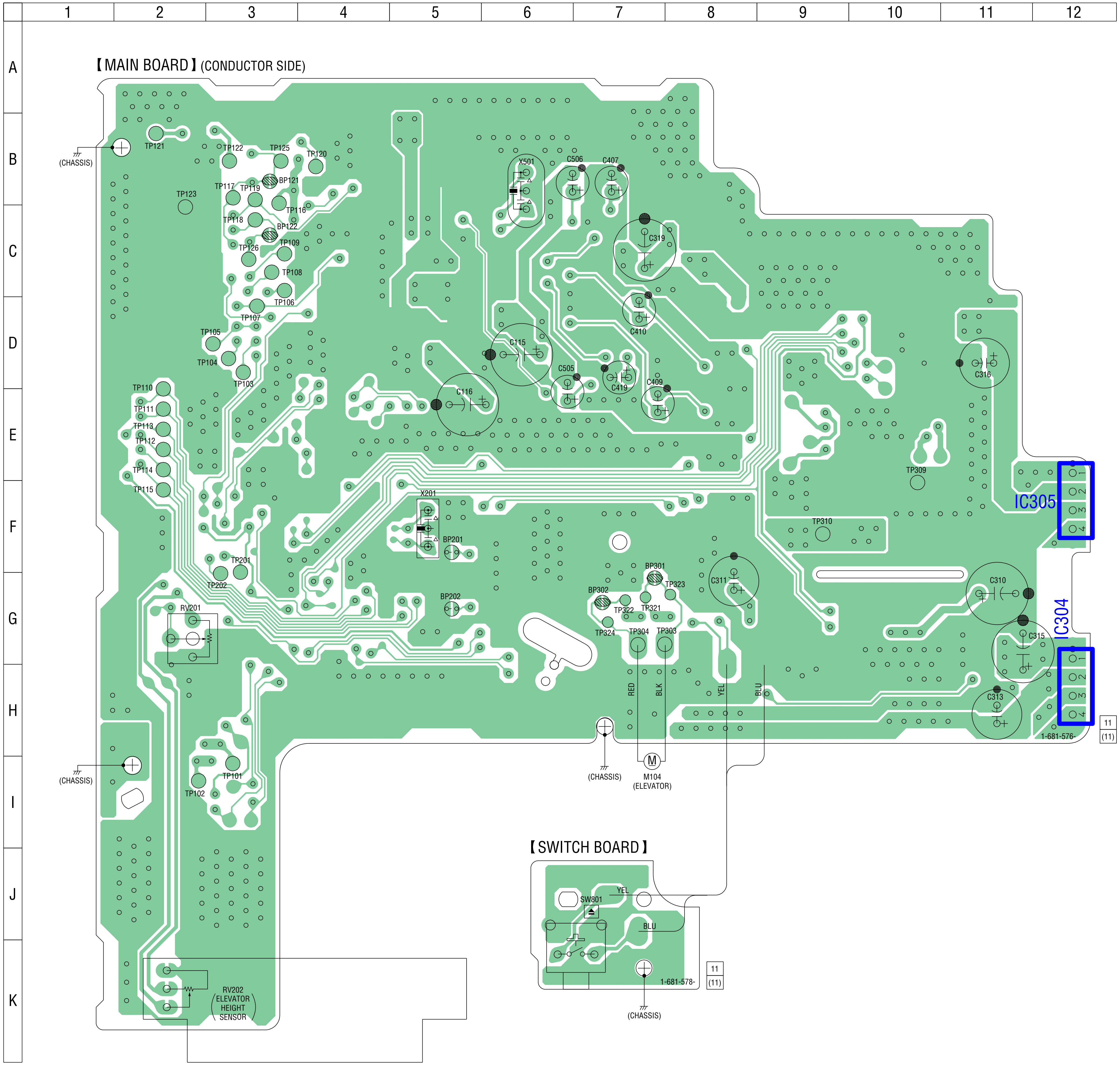
• **Semiconductor Location**

Ref. No.	Location
D301	E-2
D304	E-3
D305	E-3
D306	F-5
D307	F-5
D310	F-5
D312	G-4
IC101	C-8
IC201	F-9
IC301	H-4
IC302	D-3
IC303	G-3
IC306	C-5
IC401	C-6
Q202	G-8
Q302	F-6
Q303	F-4
Q305	G-4
Q402	F-6
Q410	D-4
Q420	E-4



7-7. PRINTED WIRING BOARDS – MAIN (Conductor Side)/SWITCH Boards –

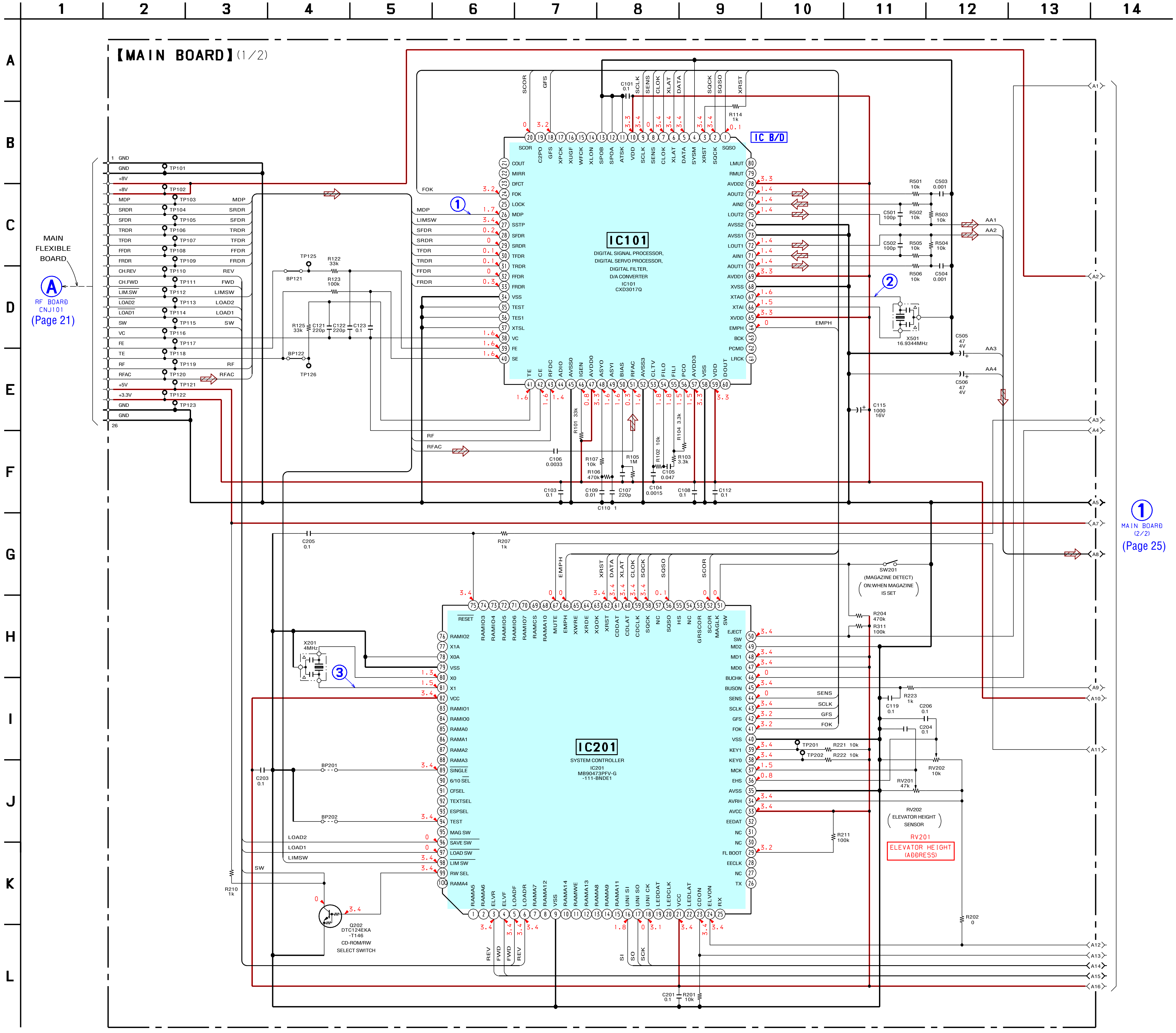
• See page 19 for Circuit Boards Location.



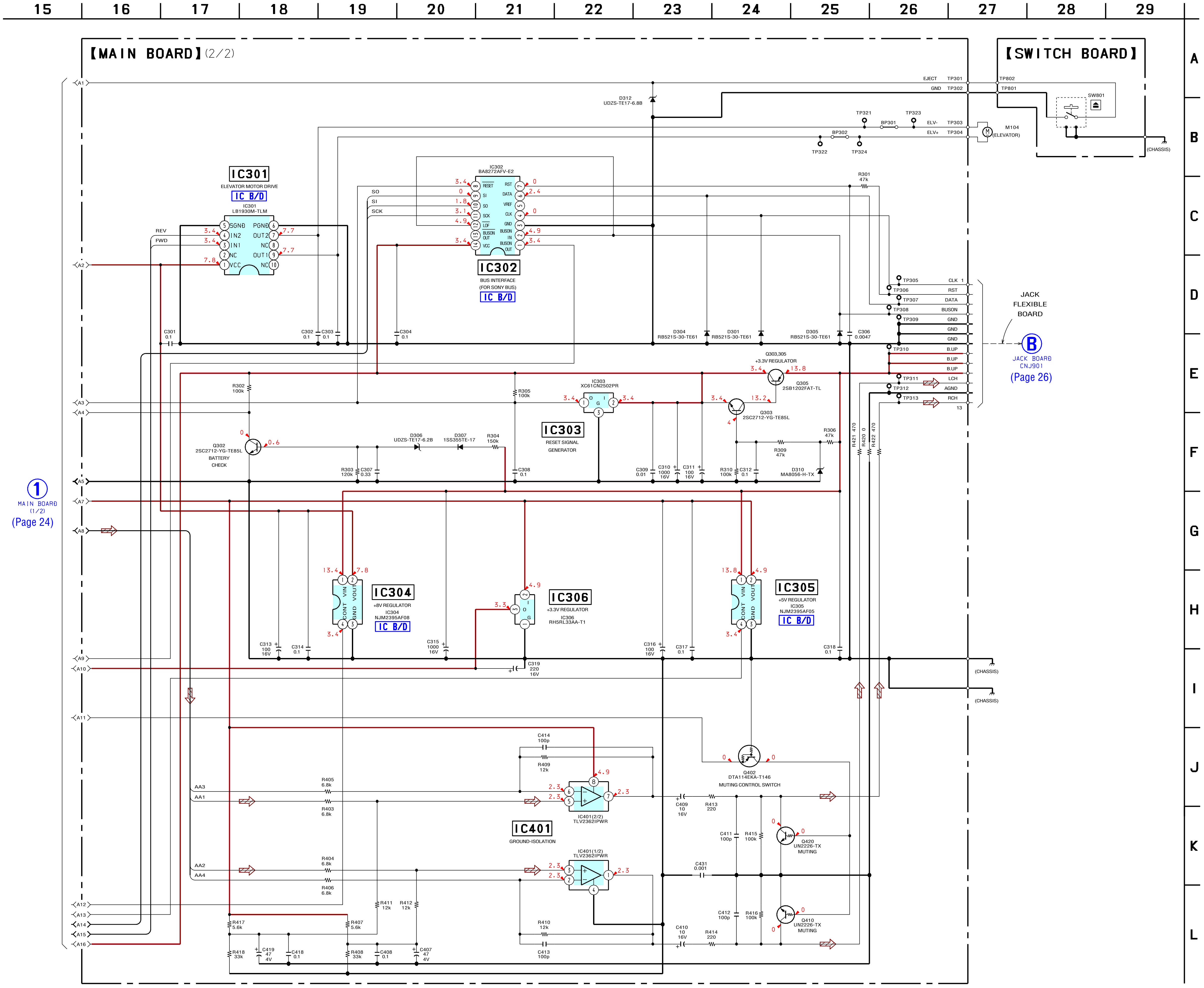
• **Semiconductor Location**

Ref. No.	Location
IC304	H-12
IC305	F-12

7-8. SCHEMATIC DIAGRAM – MAIN Board (1/2) – • See page 27 for Waveforms. • See page 28 for IC Block Diagram.



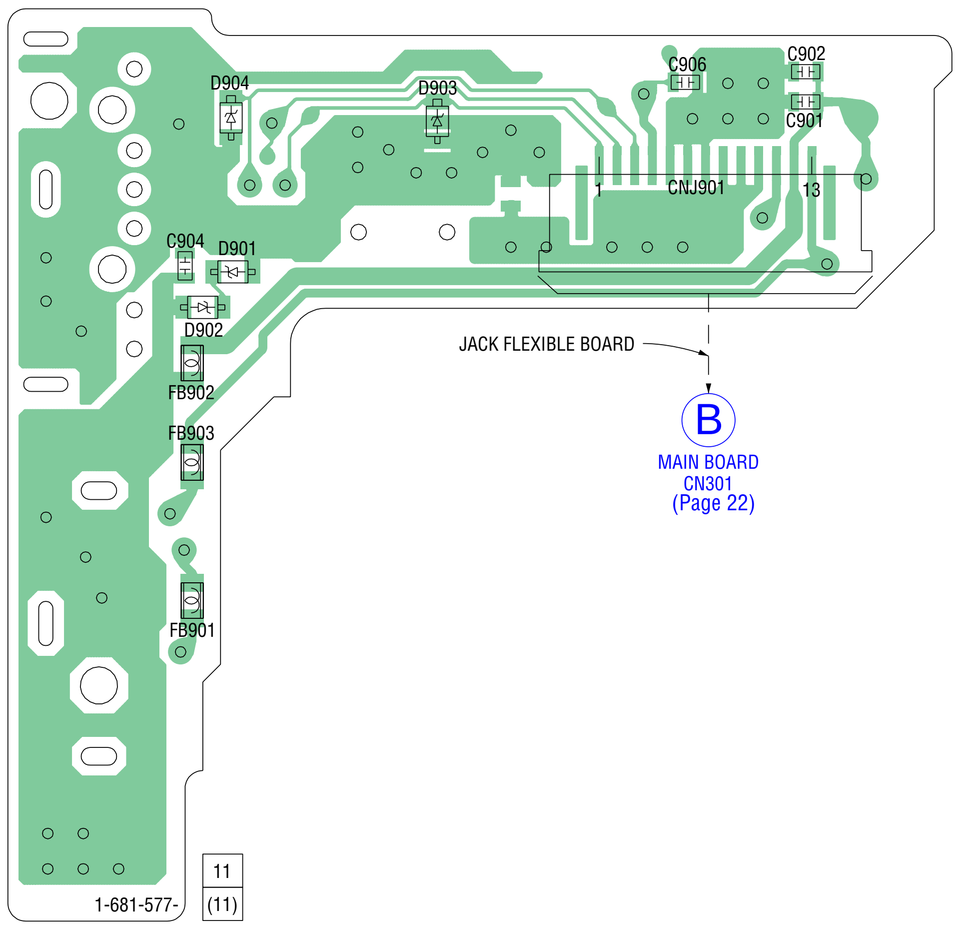
7-9. SCHEMATIC DIAGRAM – MAIN (2/2)/SWITCH Boards – • See page 28 for IC Block Diagrams.

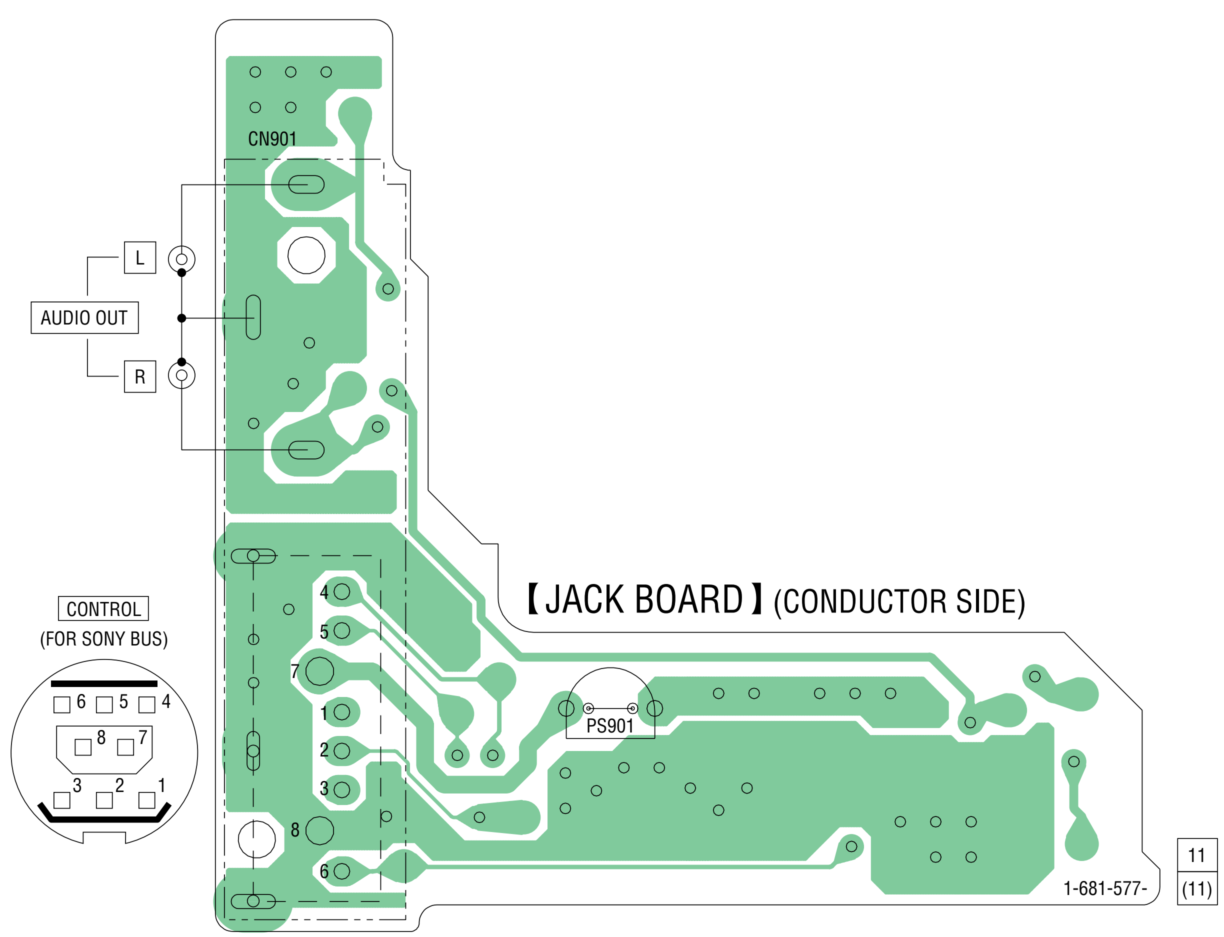


7-10. PRINTED WIRING BOARDS – JACK Board –

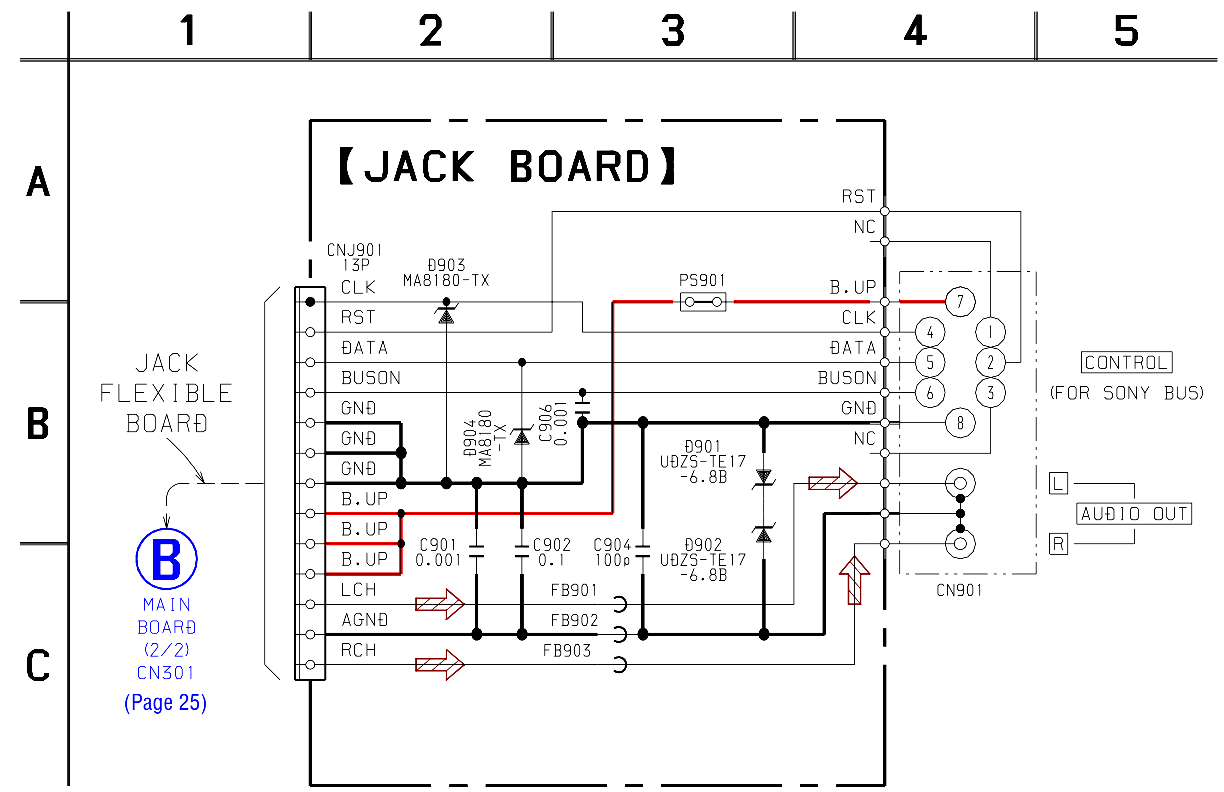
• See page 19 for Circuit Boards Location.

【JACK BOARD】(COMPONENT SIDE)





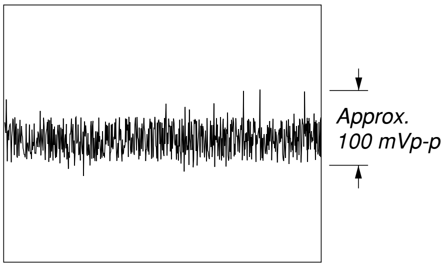
7-11. SCHEMATIC DIAGRAM – JACK Board –



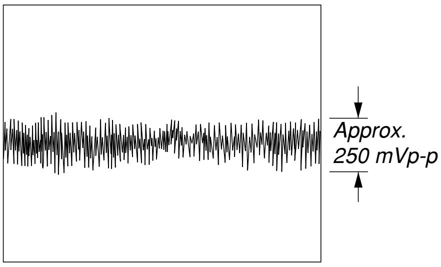
• **Waveforms**

– RF Board –

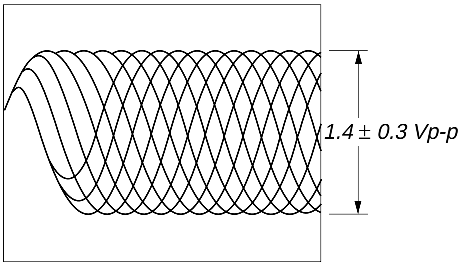
❶ IC101 ⑯ (FE) (CD play mode)



❷ IC101 ⑱ (TE) (CD play mode)

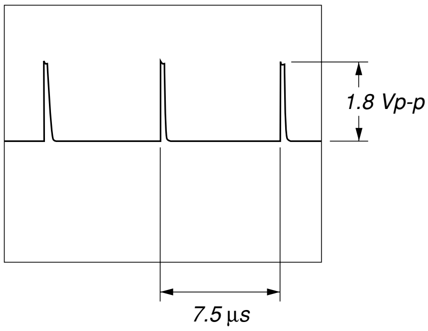


❸ IC101 ⑮ (RFAC) (CD play mode)

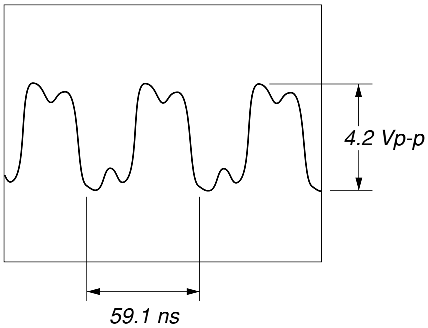


– MAIN Board –

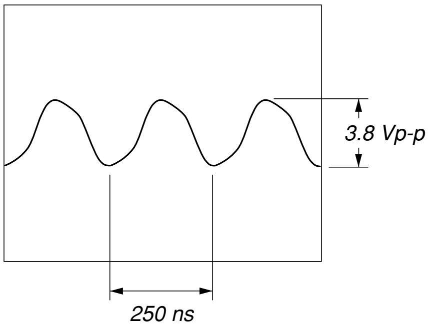
❶ IC101 ㉖ (MDP) (CD play mode)



❷ IC101 67 (XTAO) (CD play mode)



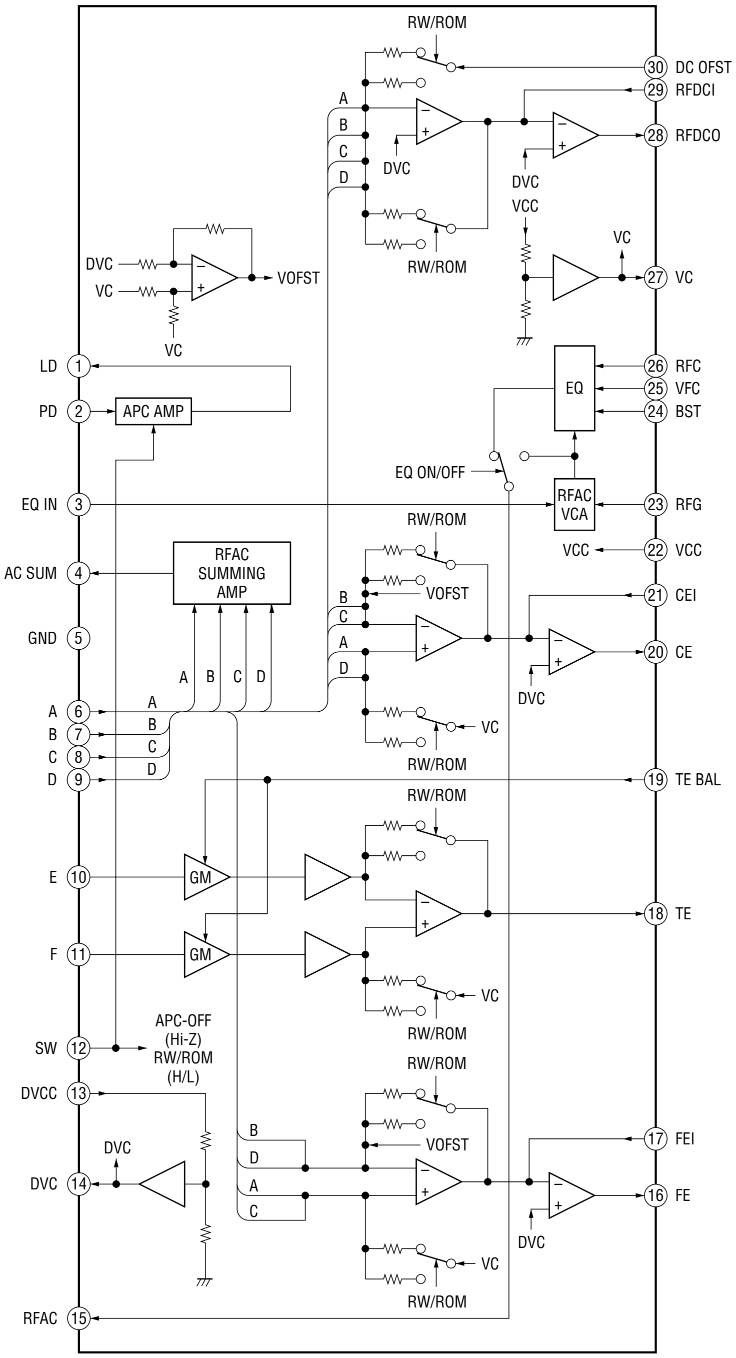
❸ IC201 81 (X1) (CD play mode)



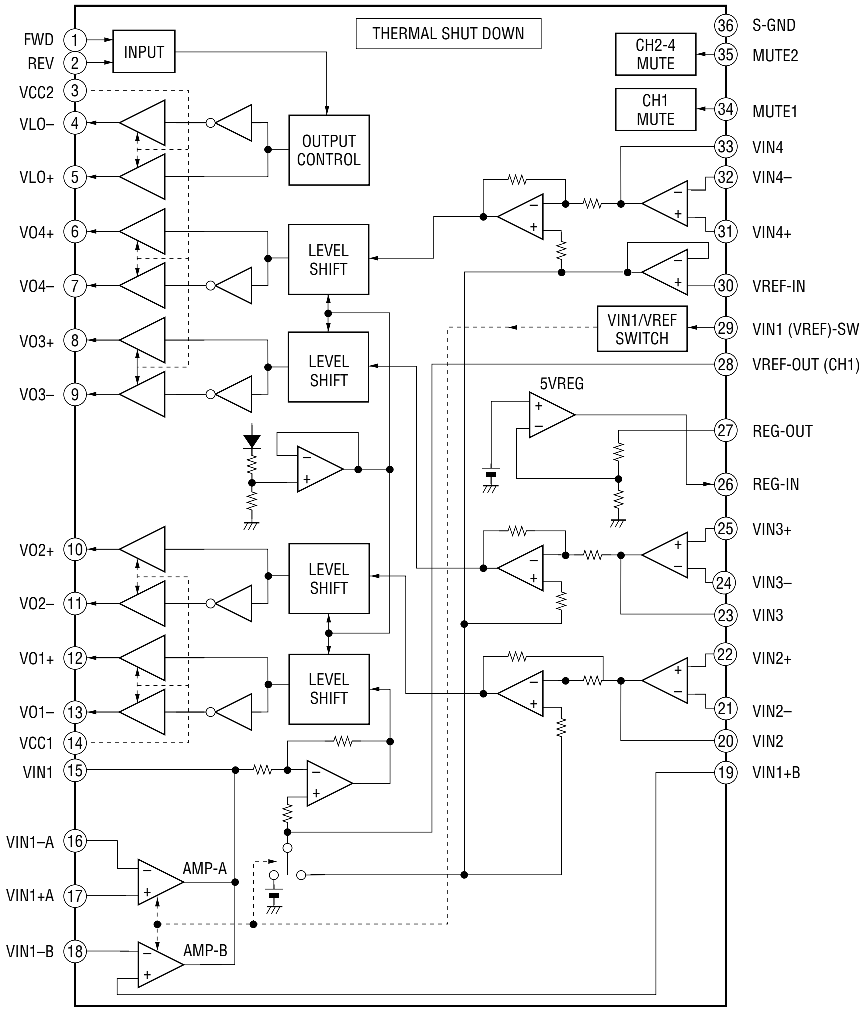
- **IC Block Diagrams**

– RF Board –

IC101 CXA2581N-T4

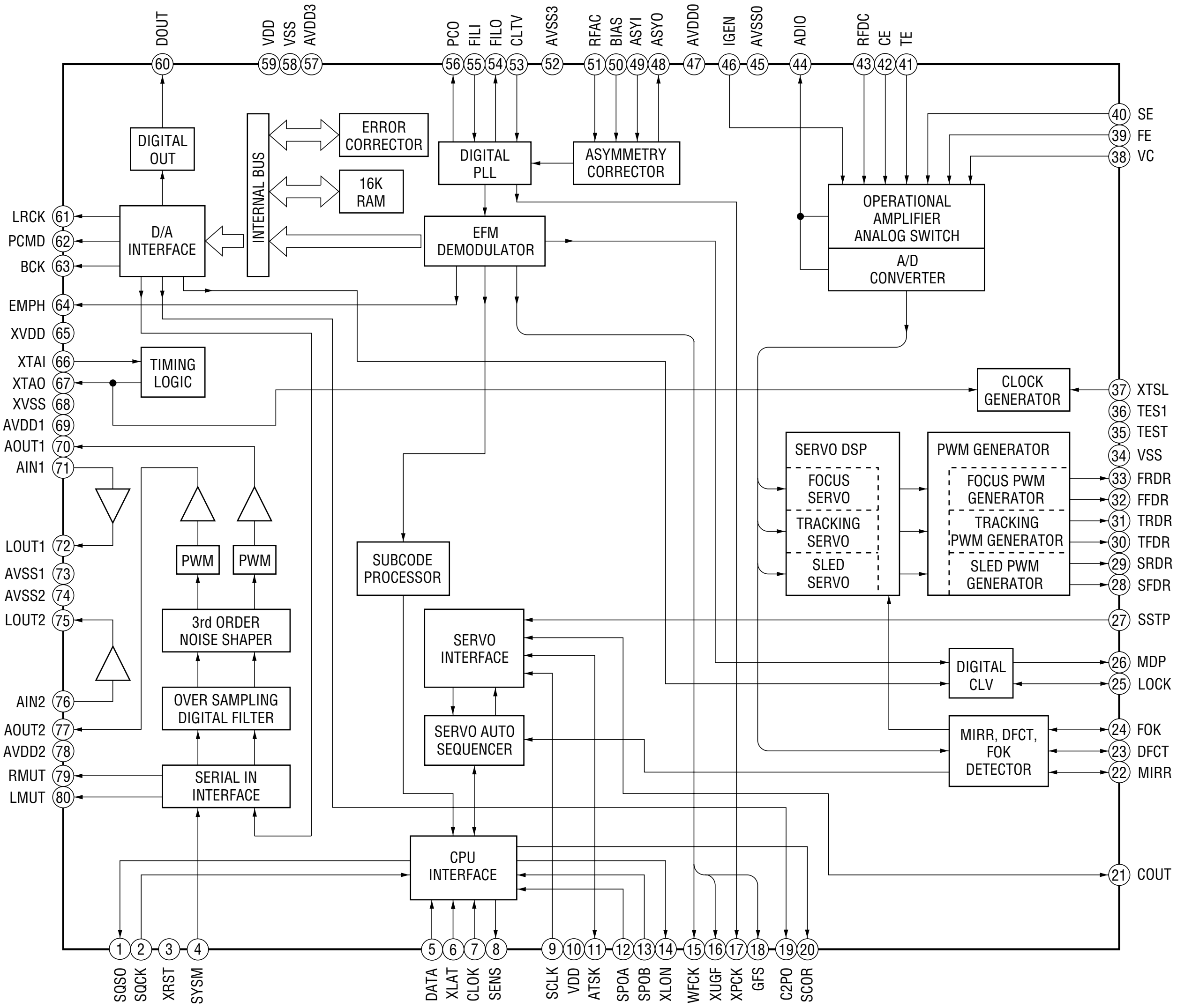


IC201 LA6576L-TE-L

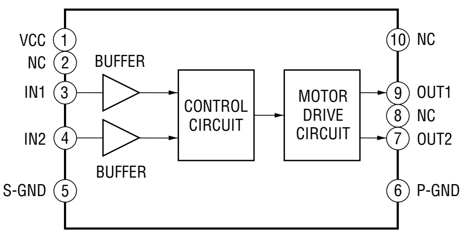


– MAIN Board –

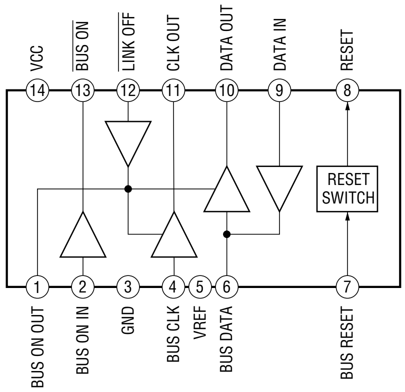
IC101 CXD3017Q



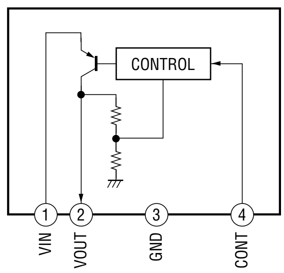
IC301 LB1930M-TLM



IC302 BA8272AFV-E2



IC304 NJM2395AF08
IC305 NJM2395AF05



7-12. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC201 MB90473PFV-G-111-BNDE1 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1, 2	RAMA5, RAMA6	O	Address signal output to the S-RAM Not used (open)
3	ELVR	O	Motor drive signal (elevator down direction) output to the elevator motor drive (IC301) *1
4	ELVF	O	Motor drive signal (elevator up direction) output to the elevator motor drive (IC301) *1
5	LOADF	O	Motor drive signal (load chucking direction) output to the chucking motor drive (IC201) *2
6	LOADR	O	Motor drive signal (save direction) output to the chucking motor drive (IC201) *2
7, 8	RAMA7, RAMA12	O	Address signal output to the S-RAM Not used (open)
9	VSS	—	Ground terminal
10	RAMA14	O	Address signal output to the S-RAM Not used (open)
11	RAMWE	O	Write enable output to the S-RAM Not used (open)
12 to15	RAMA13, RAMA8, RAMA9, RAMA11	O	Address signal output to the S-RAM Not used (open)
16	UNI SI	I	Serial data input from the SONY bus interface (IC302)
17	UNI SO	O	Serial data output to the SONY bus interface (IC302)
18	UNI CK	I	Serial data transfer clock signal input from the SONY bus interface (IC302)
19	LEDDAT	O	Not used (open)
20	LEDCLK	O	Not used (open)
21	VCC	—	Power supply terminal (+3.3V)
22	LEDLAT	O	Not used (open)
23	CDON	O	D/A converter and servo section power supply on/off control signal output "H": power on
24	ELVON	O	Mechanism deck section power supply on/off control signal output "H": power on
25	RX	I	Input terminal at the flash memory data write mode Not used (open)
26	TX	O	Output terminal at the flash memory data write mode Not used (open)
27	NC	O	Not used (open)
28	EECLK	O	Serial data transfer clock signal output to the EEPROM Not used (open)
29	FL BOOT	I	Flash memory data write control signal input terminal "L" active Not used (fixed at "H")
30, 31	NC	O	Not used (open)
32	EEDAT	I/O	Two-way data bus with the EEPROM Not used (open)
33	AVCC	—	Power supply terminal (+3.3V) (for A/D converter)
34	AVRH	I	Reference voltage (+3.3V) input terminal (for A/D converter)
35	AVSS	—	Ground terminal (for A/D converter)
36	EHS	I	Elevator height position detection signal input from the RV202 (elevator height sensor) (A/D input)
37	MCK	I	Input of detection signal for the fine adjustment (elevator height (address) adjustment; RV201) of elevator height position (A/D input)
38, 39	KEY0, KEY1	I	Not used (fixed at "H")
40	VSS	—	Ground terminal
41	FOK	I	Focus OK signal input from the CXD3017Q (IC101) "L": NG, "H": OK
42	GFS	I	Guard frame sync signal input from the CXD3017Q (IC101) "L": NG, "H": OK
43	SCLK	O	Serial data reading clock signal output to the CXD3017Q (IC101)
44	SENS	I	Internal status signal (sense signal) input from the CXD3017Q (IC101)
45	BUSON	I	Bus on/off control signal input from the SONY bus interface (IC302) "H": bus on
46	BUCHK	I	Battery detection signal input "L": battery on
47, 48	MD0, MD1	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
49	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
50	EJECT SW	I	Eject switch (SW801) input terminal "L" active
51	MAGLK SW	I	Magazine detect switch (SW201) input terminal "L": magazine is set

Pin No.	Pin Name	I/O	Description
52	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD3017Q (IC101)
53	GRSCOR	I	Subcode sync (S0+S1) detection signal input terminal Not used (open)
54	NC	O	Not used (open)
55	HS	O	Normal/high speed playback control signal output terminal "L": high speed playback Not used (open)
56	SQSO	I	Subcode Q data input from the CXD3017Q (IC101)
57	NC	O	Not used (open)
58	SQCK	O	Subcode Q data reading clock signal output to the CXD3017Q (IC101)
59	CDCLK	O	Serial data transfer clock signal output to the CXD3017Q (IC101)
60	CDLAT	O	Serial data latch pulse signal output to the CXD3017Q (IC101)
61	CDDAT	O	Serial data output to the CXD3017Q (IC101)
62	XRST	O	System reset signal output to the CXD3017Q (IC101) "L": reset
63	XQOK	O	Subcode Q OK pulse signal output terminal Not used (open)
64	XRDE	O	D-RAM read enable signal output terminal Not used (open)
65	XWRE	O	D-RAM write enable signal output terminal Not used (open)
66	EMPH	O	Emphasis control signal output to the CXD3017Q (IC101) "H": emphasis on
67	MUTE	O	Audio line muting on/off control signal output "H": muting on
68	RAMA10	O	Address signal output to the S-RAM Not used (open)
69	RAMCS	O	Chip select enable output to the S-RAM Not used (open)
70 to 74	RAMIO7 to RAMIO3	I/O	Two-way data bus with the S-RAM Not used (open)
75	$\overline{\text{RESET}}$	I	System reset signal input from the SONY bus interface (IC302) and reset signal generator (IC303) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
76	RAMIO2	I/O	Two-way data bus with the S-RAM Not used (open)
77	X1A	O	Sub system clock output terminal Not used (open)
78	X0A	I	Sub system clock input terminal Not used (fixed at "L")
79	VSS	—	Ground terminal
80	X0	I	Main system clock input terminal (4 MHz)
81	X1	O	Main system clock output terminal (4 MHz)
82	VCC	—	Power supply terminal (+3.3V)
83, 84	RAMIO1, RAMIO0	I/O	Two-way data bus with the S-RAM Not used (open)
85 to 88	RAMA0 to RAMA3	O	Address signal output to the S-RAM Not used (open)
89	$\overline{\text{SINGLE}}$	I	Setting terminal for the single disc/multiple discs mode "L": single disc mode, "H": multiple discs mode (fixed at "H")
90	6/$\overline{\text{10}}$ SEL	I	Setting terminal for the 6 discs changer/10 discs changer model "L": 10 discs changer model, "H": 6 discs changer model Not used (open)
91	CFSEL	I	Custom file on/off setting terminal "L": custom file on Not used (fixed at "H")
92	TEXTSEL	I	CD text mode setting terminal "L": CD text on, "H": does not display track name Not used (fixed at "H")
93	ESPSEL	I	ESP mode setting terminal "L": ESP on Not used (open)
94	TEST	I	Test on/off setting terminal "L": test mode Not used (fixed at "H")
95	MAG SW	I	Magazine in/out detect switch input terminal Not used (open)
96	$\overline{\text{SAVE SW}}$	I	Save end detect switch (SW2) input terminal "L": When completion of the disc save operation
97	$\overline{\text{LOAD SW}}$	I	Chucking end detect switch (SW1) input terminal "L": When completion of the disc chucking operation

Pin No.	Pin Name	I/O	Description
98	$\overline{\text{LIM SW}}$	I	Sled limit in detect switch (SW3) input terminal “L”: When the optical pick-up is inner position
99	RW SEL	O	CD-ROM/RW selection signal output “L”: CD-RW, “H”: CD-ROM
100	RAMA4	O	Address signal output to the S-RAM Not used (open)

*1 elevator motor (M104) control

Mode / Terminal	STOP	ELEVATOR UP	ELEVATOR DOWN	BRAKE
ELVF (pin ④)	“L”	“L”	“H”	“H”
ELVR (pin ③)	“L”	“H”	“L”	“H”

*2 chucking motor (M103) control

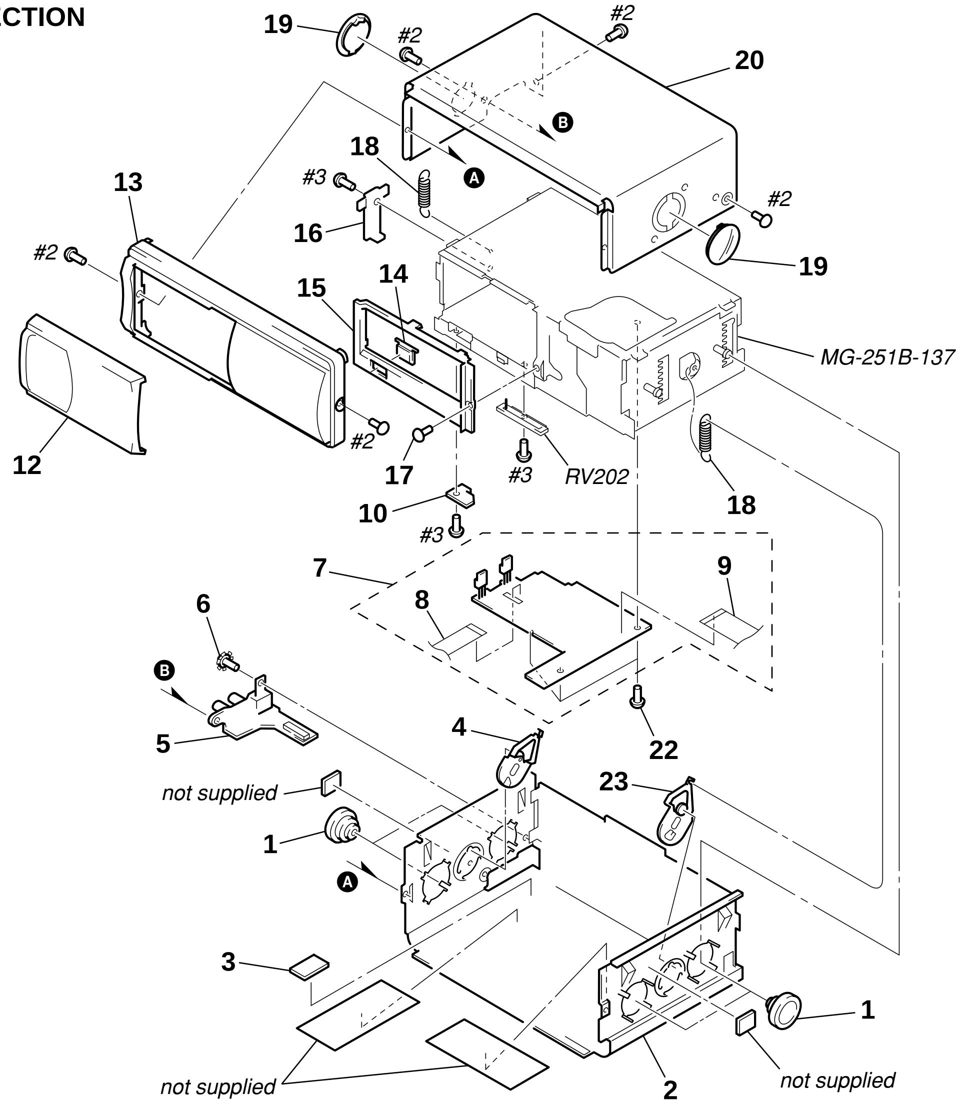
Mode / Terminal	STOP	LOAD CHUCKING	SAVE	BRAKE
LOADF (pin ⑤)	“L”	“L”	“H”	“H”
LOADR (pin ⑥)	“L”	“H”	“L”	“H”

SECTION 8
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

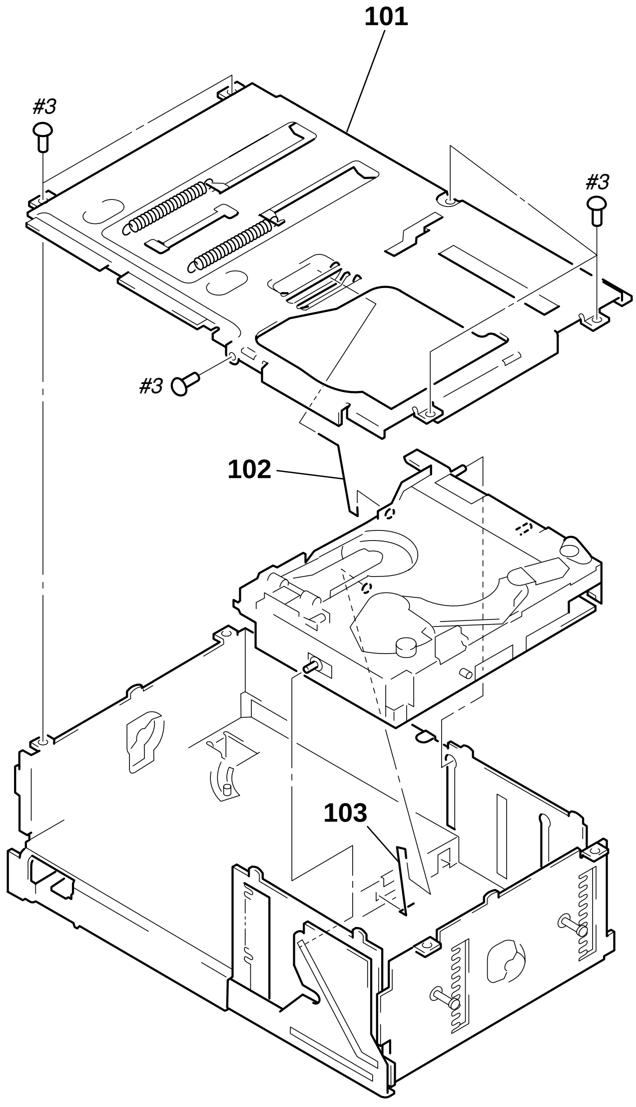
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

8-1. CASE SECTION



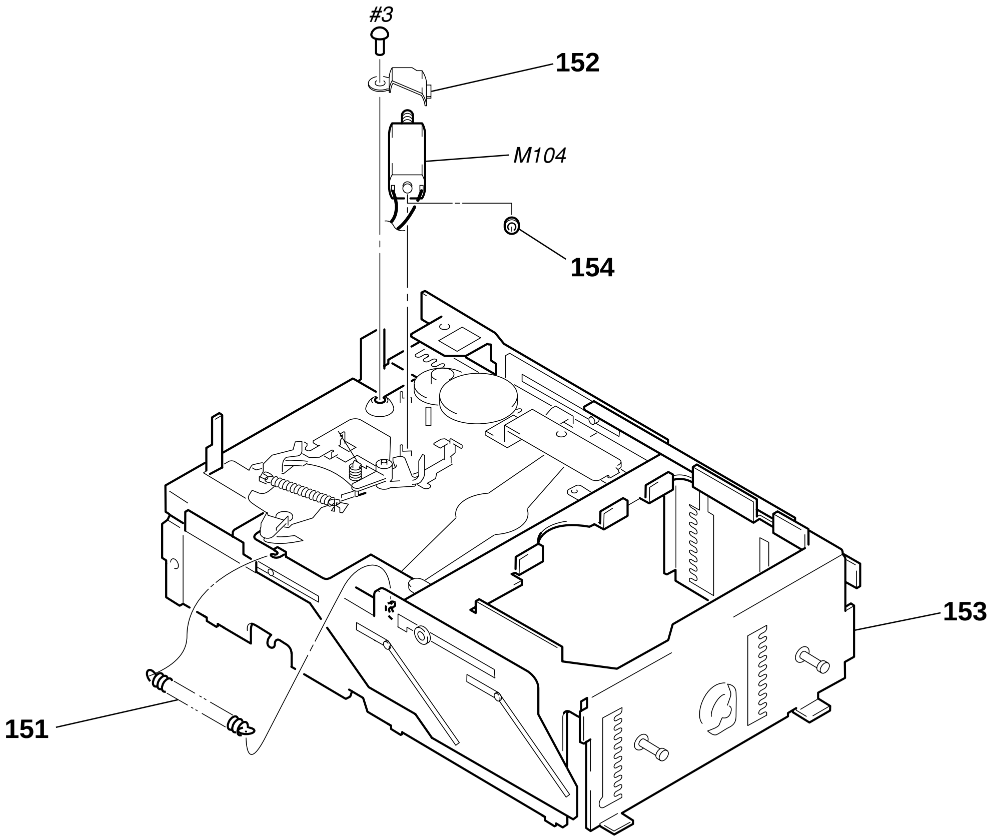
Ref. No.	Part No.	Description	Remark
1	3-047-852-01	DAMPER (T)	
2	3-045-543-81	CASE (LOWER. T)	
* 3	3-024-065-01	CUSHION (EJECT-T)	
4	X-3375-357-1	ARM (FLT) ASSY	
5	1-681-577-11	JACK BOARD	
6	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
7	A-3283-194-A	MAIN BOARD, COMPLETE	
8	1-676-340-12	JACK FLEXIBLE BOARD	
9	1-676-339-12	MAIN FLEXIBLE BOARD	
10	1-681-578-11	SWITCH BOARD	
12	X-3379-707-1	DOOR (L) ASSY	
13	3-224-392-21	PANEL (L), FRONT	
14	3-022-007-02	BUTTON (EJT) (⏏)	
15	3-041-218-21	ESCUTCHEON (T)	
* 16	3-022-012-01	HEAT SINK (T)	
17	3-042-244-11	SCREW (T)	
18	3-038-166-01	SPRING (FL), TENSION COIL	
19	3-047-886-11	LEVER (FLT. 838)	
20	3-046-160-81	CASE (UPPER. T)	
22	3-935-636-11	SCREW (FP)	
23	X-3375-360-2	ARM (FRT) ASSY	
RV202	1-227-137-11	RES, VAR, SLIDE 10K (ELEVATOR HEIGHT SENSOR)	

8-2. MECHANISM DECK SECTION-1 (MG-251B-137)



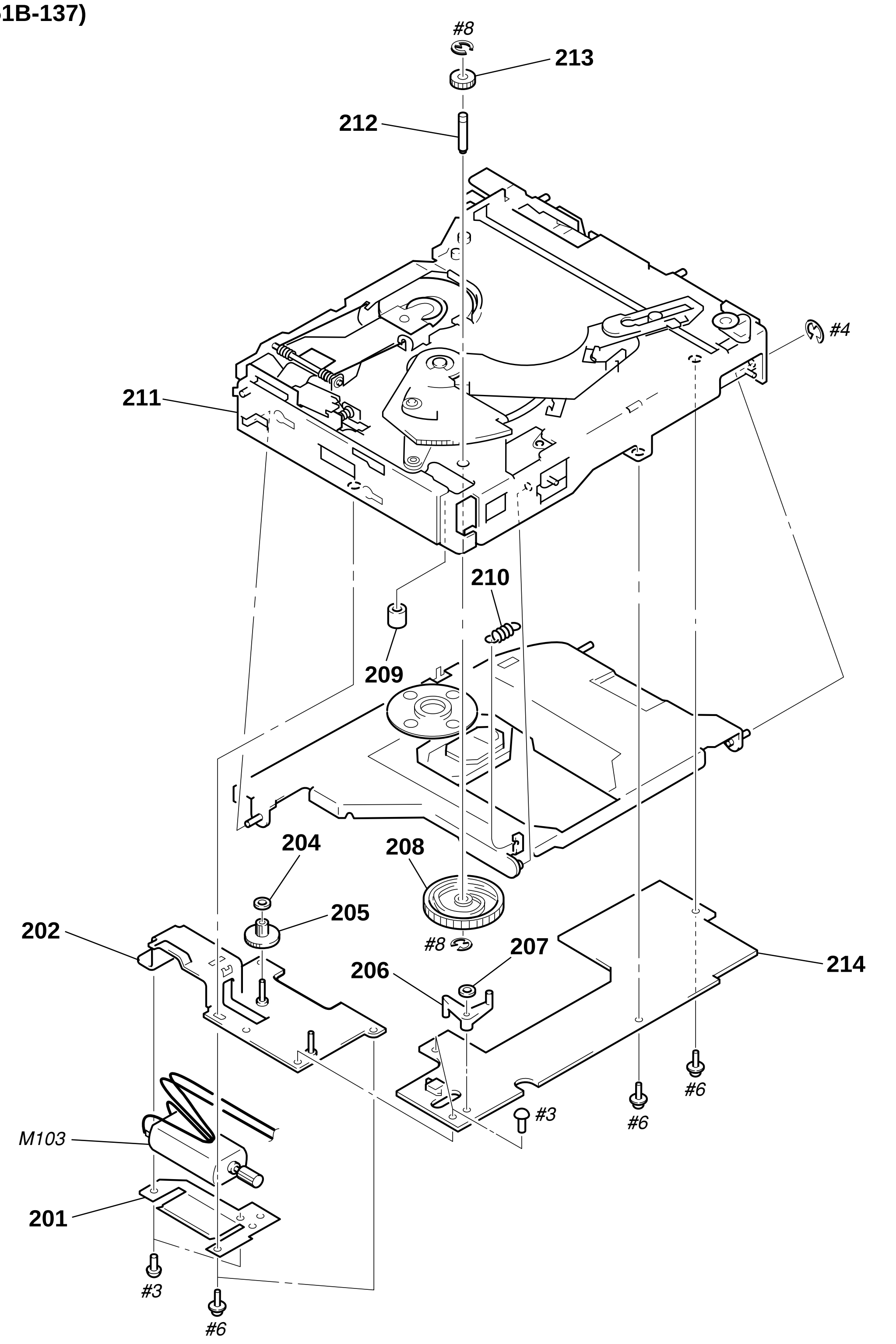
Ref. No.	Part No.	Description	Remark
101	X-3378-091-1	CHASSIS (U. S) SUB ASSY	
102	3-024-161-01	SPRING (SUT)	
103	3-011-997-01	SPRING (STOPPER. LOWER)	

8-3. MECHANISM DECK SECTION-2
(MG-251B-137)



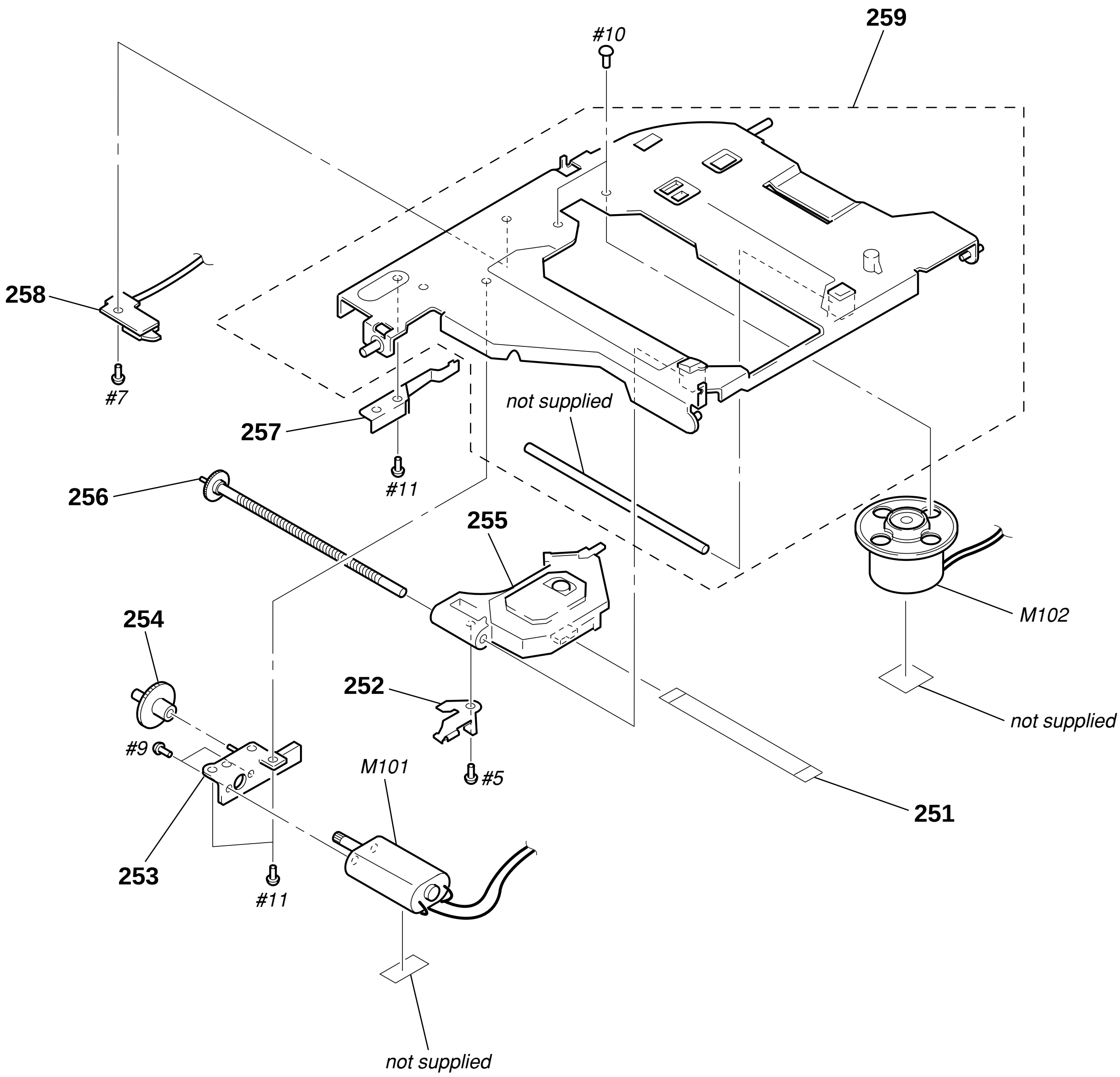
Ref. No.	Part No.	Description	Remark
151	3-024-170-01	SPRING (SB), TENSION	
* 152	3-040-790-02	BRACKET (EVM. S)	
153	X-3378-092-6	CHASSIS (D. S) SUB ASSY	
* 154	3-014-685-01	SPACER (MO)	
M104	A-3301-123-A	ELJ MOTOR ASSY (ELEVATOR)	

8-4. MECHANISM DECK SECTION-3 (MG-251B-137)



Ref. No.	Part No.	Description	Remark
* 201	3-024-150-01	RETAINER (CHM)	
* 202	X-3378-080-1	BRACKET (CHM. D) ASSY	
204	3-321-813-01	WASHER, COTTER POLYETHYLENE	
205	3-017-139-01	GEAR (WORM LOAD A)	
206	3-022-839-02	ARM (NSW)	
207	3-573-936-00	STOPPER, REEL	
208	X-3373-552-1	GEAR (LOAD CAM) ASSY	
209	3-010-252-11	ROLLER (CRE)	
210	3-010-268-01	SPRING (DH), TENSION	
* 211	A-3290-194-L	MAIN ASSY, CHASSIS (EVY)	
212	3-010-254-11	SHAFT (ROTARY PREVENTION C)	
213	3-010-253-01	GEAR (LOMINI)	
* 214	A-3326-947-A	RF BOARD, COMPLETE	
M103	A-3301-123-A	ELJ MOTOR ASSY (CHUCKING)	

8-5. MECHANISM DECK SECTION-4 (MG-251B-137)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
251	1-676-341-11	OP FLEXIBLE BOARD	
252	3-025-743-01	SPRING (FEED), LEAF	
253	X-3378-101-1	HOLDER (SLED. S) ASSY	
254	3-931-832-01	GEAR (SL MIDWAY)	
⚠255	8-820-103-11	OPTICAL PICK-UP KSS-720A/C-RP	
256	A-3291-669-A	SHAFT (FEED) ASSY	
257	3-010-263-01	DETENT (SHAFT THRUST)	
* 258	1-679-422-12	LSW BOARD	
259	A-3301-954-B	BASE (OPT. S) (J) ASSY	
M101	A-3315-151-A	SLED MOTOR ASSY (251)	
M102	A-3301-998-A	SPINDLE MOTOR (S) SUB ASSY	

SECTION 9
ELECTRICAL PARTS LIST

JACK MAIN

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
	1-681-577-11	JACK BOARD				
		***********				
		< CAPACITOR >				
C901	1-162-964-11	CERAMIC CHIP	0.001uF	10%		50V
C902	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C904	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
C906	1-162-964-11	CERAMIC CHIP	0.001uF	10%		50V
		< CONNECTOR >				
CN901	1-779-077-51	PLUG, CONNECTOR (CONTROL, AUDIO OUT)				
CNJ901	1-778-775-21	CONNECTOR, FPC 13P				
		< DIODE >				
D901	8-719-978-33	DIODE DTZ-TT11-6.8B				
D902	8-719-978-33	DIODE DTZ-TT11-6.8B				
D903	8-719-017-94	DIODE MA8180				
D904	8-719-017-94	DIODE MA8180				
		< FERRITE BEAD >				
FB901	1-500-445-21	FERRITE	0uH			
FB902	1-500-445-21	FERRITE	0uH			
FB903	1-500-445-21	FERRITE	0uH			
		< IC LINK >				
PS901	1-532-686-21	LINK, IC				
***						
	A-3283-194-A	MAIN BOARD, COMPLETE				
		*********************				
	1-676-339-12	MAIN FLEXIBLE BOARD				
	1-676-340-12	JACK FLEXIBLE BOARD				
		< CAPACITOR >				
C101	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C103	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C104	1-162-965-11	CERAMIC CHIP	0.0015uF	10%		50V
C105	1-165-176-11	CERAMIC CHIP	0.047uF	10%		16V
C106	1-162-967-11	CERAMIC CHIP	0.0033uF	10%		50V
C107	1-162-960-11	CERAMIC CHIP	220PF	10%		50V
C108	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C109	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
C110	1-125-837-11	CERAMIC CHIP	1uF	10%		6.3V
C112	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C115	1-115-466-11	ELECT	1000uF	20%		16V
C119	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C121	1-162-960-11	CERAMIC CHIP	220PF	10%		50V
C122	1-162-960-11	CERAMIC CHIP	220PF	10%		50V
C123	1-107-826-11	CERAMIC CHIP	0.1uF	10%		16V
C201	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C203	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C204	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C205	1-107-826-11	CERAMIC CHIP	0.1uF	10%		16V
C206	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C301	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C302	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C303	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C304	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C306	1-162-968-11	CERAMIC CHIP	0.0047uF	10%		50V
C307	1-128-934-11	CERAMIC CHIP	0.33uF	20%		10V
C308	1-107-826-11	CERAMIC CHIP	0.1uF	10%		16V
C309	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
C310	1-115-466-00	ELECT	1000uF	20%		16V
C311	1-125-972-61	ELECT	100uF	20%		16V
C312	1-107-826-11	CERAMIC CHIP	0.1uF	10%		16V
C313	1-125-972-61	ELECT	100uF	20%		16V
C314	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C315	1-115-466-00	ELECT	1000uF	20%		16V
C316	1-125-972-61	ELECT	100uF	20%		16V
C317	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C318	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C319	1-128-499-11	ELECT	220uF	20%		16V
C407	1-124-589-11	ELECT	47uF	20%		16V
C408	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C409	1-126-157-11	ELECT	10uF	20%		16V
C410	1-126-157-11	ELECT	10uF	20%		16V
C411	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
C412	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
C413	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
C414	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
C418	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C419	1-124-589-11	ELECT	47uF	20%		16V
C431	1-162-964-11	CERAMIC CHIP	0.001uF	10%		50V
C501	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
C502	1-162-927-11	CERAMIC CHIP	100PF	5%		50V
C503	1-162-964-11	CERAMIC CHIP	0.001uF	10%		50V
C504	1-162-964-11	CERAMIC CHIP	0.001uF	10%		50V

MAIN | LSW | RF

Ref. No.	Part No.	Description			Remark
C505	1-124-589-11	ELECT	47uF	20%	16V
C506	1-124-589-11	ELECT	47uF	20%	16V
		< DIODE >			
D301	8-719-071-34	DIODE RB521S-30-TE61			
D304	8-719-071-34	DIODE RB521S-30-TE61			
D305	8-719-071-34	DIODE RB521S-30-TE61			
D306	8-719-069-56	DIODE UDZSTE-176.2B			
D307	8-719-988-61	DIODE 1SS355TE-17			
D310	8-719-977-03	DIODE DTZ5.6B			
D312	8-719-978-33	DIODE DTZ-TT11-6.8B			
		< IC >			
IC101	8-752-402-31	IC CXD3017Q			
IC201	6-800-418-01	IC MB90473PFV-G-111-BNDE1			
IC301	8-759-527-33	IC LB1930M-TLM			
IC302	8-759-829-46	IC BA8272AFV-E2			
IC303	8-759-827-97	IC XC61CN2502PR			
IC304	8-759-833-13	IC NJM2395AF08			
IC305	8-759-833-12	IC NJM2395AF05			
IC306	8-759-444-93	IC RH5RL33AA-T1			
IC401	8-759-662-11	IC TLV2362IPWR			
		< TRANSISTOR >			
Q202	8-729-901-00	TRANSISTOR	DTC124EK		
Q302	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q303	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q305	8-729-822-84	TRANSISTOR	2SB1202FAST		
Q402	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q410	8-729-015-39	TRANSISTOR	DTC323TK		
Q420	8-729-015-39	TRANSISTOR	DTC323TK		
		< RESISTOR >			
R101	1-216-839-11	METAL CHIP	33K	5%	1/16W
R102	1-216-833-11	METAL CHIP	10K	5%	1/16W
R103	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R104	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R105	1-216-857-11	METAL CHIP	1M	5%	1/16W
R106	1-216-853-11	METAL CHIP	470K	5%	1/16W
R107	1-216-833-11	METAL CHIP	10K	5%	1/16W
R114	1-216-821-11	METAL CHIP	1K	5%	1/16W
R122	1-216-839-11	METAL CHIP	33K	5%	1/16W
R123	1-216-845-11	METAL CHIP	100K	5%	1/16W
R125	1-216-839-11	METAL CHIP	33K	5%	1/16W
R201	1-216-833-11	METAL CHIP	10K	5%	1/16W
R202	1-216-864-11	METAL CHIP	0	5%	1/16W
R204	1-216-853-11	METAL CHIP	470K	5%	1/16W
R207	1-216-821-11	METAL CHIP	1K	5%	1/16W
R210	1-216-821-11	METAL CHIP	1K	5%	1/16W
R211	1-216-845-11	METAL CHIP	100K	5%	1/16W
R221	1-216-833-11	METAL CHIP	10K	5%	1/16W
R222	1-216-833-11	METAL CHIP	10K	5%	1/16W
R223	1-216-821-11	METAL CHIP	1K	5%	1/16W
R301	1-216-841-11	METAL CHIP	47K	5%	1/16W
R302	1-216-845-11	METAL CHIP	100K	5%	1/16W
R303	1-216-846-11	METAL CHIP	120K	5%	1/16W
R304	1-216-847-11	METAL CHIP	150K	5%	1/16W
R305	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R306	1-216-841-11	METAL CHIP	47K	5%	1/16W
R309	1-216-841-11	METAL CHIP	47K	5%	1/16W
R310	1-216-845-11	METAL CHIP	100K	5%	1/16W
R311	1-216-845-11	METAL CHIP	100K	5%	1/16W
R403	1-218-867-11	RES-CHIP	6.8K	2%	1/16W
R404	1-218-867-11	RES-CHIP	6.8K	2%	1/16W
R405	1-218-867-11	RES-CHIP	6.8K	2%	1/16W
R406	1-218-867-11	RES-CHIP	6.8K	2%	1/16W
R407	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R408	1-216-839-11	METAL CHIP	33K	5%	1/16W
R409	1-219-316-11	RES-CHIP	12K	2%	1/16W
R410	1-219-316-11	RES-CHIP	12K	2%	1/16W
R411	1-219-316-11	RES-CHIP	12K	2%	1/16W
R412	1-219-316-11	RES-CHIP	12K	2%	1/16W
R413	1-219-274-11	RES-CHIP	220	2%	1/16W
R414	1-219-274-11	RES-CHIP	220	2%	1/16W
R415	1-216-845-11	METAL CHIP	100K	5%	1/16W
R416	1-216-845-11	METAL CHIP	100K	5%	1/16W
R417	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R418	1-216-839-11	METAL CHIP	33K	5%	1/16W
R420	1-216-864-11	METAL CHIP	0	5%	1/16W
R421	1-219-282-21	RES-CHIP	470	2%	1/16W
R422	1-219-282-21	RES-CHIP	470	2%	1/16W
R501	1-218-871-11	RES-CHIP	10K	2%	1/16W
R502	1-218-871-11	RES-CHIP	10K	2%	1/16W
R503	1-218-871-11	RES-CHIP	10K	2%	1/16W
R504	1-218-871-11	RES-CHIP	10K	2%	1/16W
R505	1-218-871-11	RES-CHIP	10K	2%	1/16W
R506	1-218-871-11	RES-CHIP	10K	2%	1/16W
		< VARIABLE RESISTOR >			
RV201	1-223-834-11	RES, ADJ, CARBON 47K			
		< SWITCH >			
SW201	1-529-565-41	SWITCH, PUSH (1KEY) (MAGAZINE DETECT)			
		< VIBRATOR >			
X201	1-781-282-11	VIBRATOR, CERAMIC (4MHz)			
X501	1-760-307-11	VIBRATOR, CERAMIC (16.9344MHz)			

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*	1-679-422-12	LSW BOARD			
		**********			
		< SWITCH >			
SW3	1-529-565-41	SWITCH, PUSH (1KEY) (LIMIT)			

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*	A-3326-947-A	RF BOARD, COMPLETE			
		******************			
		< CAPACITOR >			
C101	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C102	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C103	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-126-206-11	ELECT CHIP	100uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C106	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C107	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C108	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C109	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C111	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C121	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C122	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C201	1-117-681-11	ELECT CHIP	100uF	20%	16V
C202	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C203	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C204	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C205	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C206	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C207	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C208	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C209	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C217	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN102	1-778-303-21	CONNECTOR, FPC (ZIF) 16P			
CNJ101	1-778-777-21	CONNECTOR, FPC 26P			
		< IC >			
IC101	8-752-089-74	IC CXA2581N-T4			
IC201	8-759-832-99	IC LA6576L-TE-L			
		< TRANSISTOR >			
Q101	8-729-141-48	TRANSISTOR	2SB624-BV345		
Q102	8-729-901-00	TRANSISTOR	DTC124EK		
		< RESISTOR >			
R101	1-216-801-11	METAL CHIP	22	5%	1/16W
R102	1-216-837-11	METAL CHIP	22K	5%	1/16W
R103	1-216-837-11	METAL CHIP	22K	5%	1/16W
R104	1-216-845-11	METAL CHIP	100K	5%	1/16W
R105	1-216-801-11	METAL CHIP	22	5%	1/16W
R106	1-216-864-11	METAL CHIP	0	5%	1/16W
R107	1-216-845-11	METAL CHIP	100K	5%	1/16W
R108	1-216-833-11	METAL CHIP	10K	5%	1/16W
R109	1-216-836-11	METAL CHIP	18K	5%	1/16W
R110	1-216-836-11	METAL CHIP	18K	5%	1/16W
R112	1-216-845-11	METAL CHIP	100K	5%	1/16W
R113	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W
R117	1-216-833-11	METAL CHIP	10K	5%	1/16W
R119	1-216-864-11	METAL CHIP	0	5%	1/16W
R120	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R121	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R122	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R201	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R202	1-216-833-11	METAL CHIP	10K	5%	1/16W
R203	1-216-833-11	METAL CHIP	10K	5%	1/16W
R204	1-216-839-11	METAL CHIP	33K	5%	1/16W
R205	1-216-833-11	METAL CHIP	10K	5%	1/16W
R206	1-216-839-11	METAL CHIP	33K	5%	1/16W
R207	1-216-833-11	METAL CHIP	10K	5%	1/16W
R208	1-216-839-11	METAL CHIP	33K	5%	1/16W
R209	1-216-833-11	METAL CHIP	10K	5%	1/16W
R210	1-216-839-11	METAL CHIP	33K	5%	1/16W
R211	1-216-833-11	METAL CHIP	10K	5%	1/16W
R212	1-216-839-11	METAL CHIP	33K	5%	1/16W
R213	1-216-833-11	METAL CHIP	10K	5%	1/16W
R214	1-216-839-11	METAL CHIP	33K	5%	1/16W
R215	1-216-841-11	METAL CHIP	47K	5%	1/16W
R216	1-216-842-11	METAL CHIP	56K	5%	1/16W
R218	1-216-841-11	METAL CHIP	47K	5%	1/16W
R219	1-216-843-11	METAL CHIP	68K	5%	1/16W
R220	1-216-834-11	METAL CHIP	12K	5%	1/16W
R222	1-216-821-11	METAL CHIP	1K	5%	1/16W
R223	1-216-819-11	METAL CHIP	680	5%	1/16W
		< SWITCH >			
SW1	1-529-566-31	SWITCH, PUSH (1KEY) (CHUKING END DETECT)			
SW2	1-529-566-31	SWITCH, PUSH (1KEY) (SAVE END DETECT)			

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	1-681-578-11	SWITCH BOARD
		*************
		< SWITCH >
SW801	1-692-431-21	SWITCH, TACTILE (⏏)

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MISCELLANEOUS
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251	1-676-341-11	OP FLEXIBLE BOARD
⚠255	8-820-103-11	OPTICAL PICK-UP KSS-720A/C-RP
M101	A-3315-151-A	SLED MOTOR ASSY (251)
M102	A-3301-998-A	SPINDLE MOTOR (S) SUB ASSY
M103	A-3301-123-A	ELJ MOTOR ASSY (CHUCKING)
M104	A-3301-123-A	ELJ MOTOR ASSY (ELEVATOR)
RV202	1-227-137-11	RES, VAR, SLIDE 10K (ELEVATOR HEIGHT SENSOR)

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****
HARDWARE LIST
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#2	7-685-792-09	SCREW +PTT 2.6X6 (S)
#3	7-685-781-09	SCREW +PTT 2X4 (S)
#4	7-624-104-04	STOP RING 2.0, TYPE-E
#5	7-627-554-07	SCREW, PRECISION +P 2X2.2
#6	7-628-253-00	SCREW +PS 2X4
#7	7-627-553-27	SCREW, PRECISION +P 2X2.5
#8	7-624-102-04	STOP RING 1.5, TYPE-E
#9	7-627-850-28	SCREW, PRECISION +P 1.4X3
#10	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE 3
#11	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3

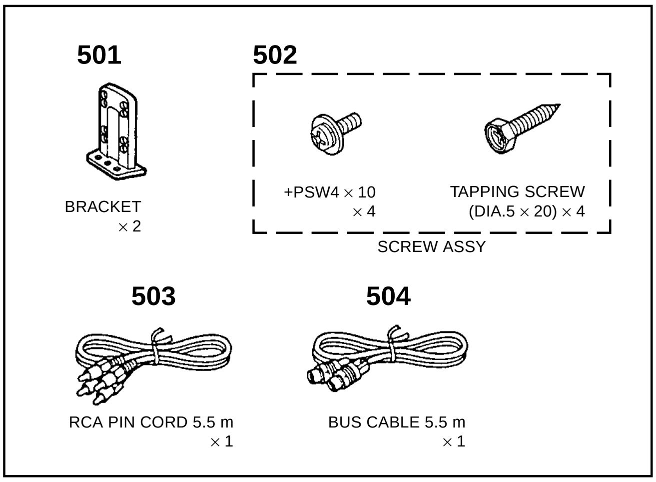
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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		*******************************	
	3-225-284-11	MANUAL, INSRTUCTION (ENGLISH, FRENCH, SPANISH, TRADITIONAL CHINESE)	
	A-3301-944-A	MAGAZINE (250T) ASSY	

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Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**************************************	
501	3-040-583-21	BRACKET (T)	
* 502	X-3369-824-1	SCREW ASSY	
503	1-590-874-11	CORD, CONNECTION (RCA PIN CORD 5.5m)	
504	1-590-519-21	CORD (WITH CONNECTOR) (BUS CABLE 5.5m)	



MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.07	New